JULY COTTON 1941

SERVING THE Textile Industries

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The Home of ARCY

ARCY is the patented enzyme product used for more than 8 years by many of the largest textile mills for liquefying ordinary pearl starch in the cooking kettles, to produce superior warp sizing, and cloth finishing mixtures.

ARCY enzymes are amylases, with characteristic properties not found in any other product. There are many other kinds of enzymes which convert starch but which have no value in textile mill use in preparing starch sizes, because they will carry the conversion into sugars, to the utter destruction of the desirable properties of starch for warp sizing. Because of this, ARCY should NOT be confused with malt diastase, pancreas, or other enzymes which convert starch into bodies which have less value in warp sizing.

Ordinary pearl starch which can be furnished by any of the CORN STARCH MANUFACTURERS in AMERICA, produces most excellent warp sizing and cloth finishing results, when liquefied with ARCY, to produce a thin sizing solution with marked penetrating and binding properties. The soluble starch thus produced, is more transparent and does not "cloud" the colors, especially noticed in denims and chambrays. Frosted splotches are prevented, and all colors show up brighter, than when the dyed threads are coated with a less transparent film.

Reasons given by most mills for using ARCY liquefied pearl starch usually are not so much because of the dollar or two saving in the cost per kettle of size, but the better results they find in weaving the warps, and the feel of the finished goods, which is so pleasing to the buyers of the goods. Also, the more soluble nature of the starch assists the finisher to get superior finishes at the bleach works.

Arcy liquefaction gives to corn starch size more of the slow congealing properties of potato starch size. Slow congealing size remains fluid for longer time at temperatures below boiling, and its fluid state during the time the wet warp is passing from the squeeze rolls to the drying drums, allows the size to FLOW into the crevices between the cotton fibres, and probably is responsible for the smoother feel imparted to the sized thread.

ARCY is the only enzyme product which has stood the test of time (over 8 years) for successfully liquefying ordinary pearl starch in the cooking kettles. No acids, chlorine, or other similar oxidizing chemicals are present. No extra equipment required, and its use is simple and practically fool-proof.

Write for free booklet "ARCY".

DRAKE CORPORATION, NORFOLK, VIRGINIA

TS1550
.C8

if

- credits are a worry
- financing problems hamper you
- you want to expand
- a thousand and one details take your time from important sales and manufacturing efforts . . *and you are looking for a solution*

then

you will want to know more about COMMERCIAL FACTORING and how it can fit into your program.

Why not make that inquiry now?

COMMERCIAL FACTORS CORPORATION

Fred'k Vietor & Achells, Inc.
Established 1828

Schefer, Schramm & Vogel
Established 1838

Peierls, Buhler & Co., Inc.
Established 18[illegible]

TWO PARK AVENUE, NEW YORK

CFC

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6967 D

Normal Service Continues on Loom Repairs Shuttles and Bobbins

Loom Repair Parts And the Defense Program

The Textile Mills of this country are operating at the highest degree of activity in history, a large percentage of them on Defense Work. Three shifts are quite general and employment of much green help is necessary.

Under these conditions we realize that it is of the utmost importance to Maintain Normal Service on loom repair parts, shuttles and bobbins. We have done it so far. We are making careful plans to continue to do so.

Through our three warehouses we have in the past provided ample service for all Draper Loom mills.

Our Normal Stock and its Regular Replenishment

has proved fully able to meet the needs of all your looms.
Your stock clerk can prove this to you.

As in past emergencies, the Textile Mills are performing well their important role in the Defense Program. We are backing them up.

DRAPER CORPORATION

Hopedale Massachusetts

Atlanta Georgia Spartanburg S C

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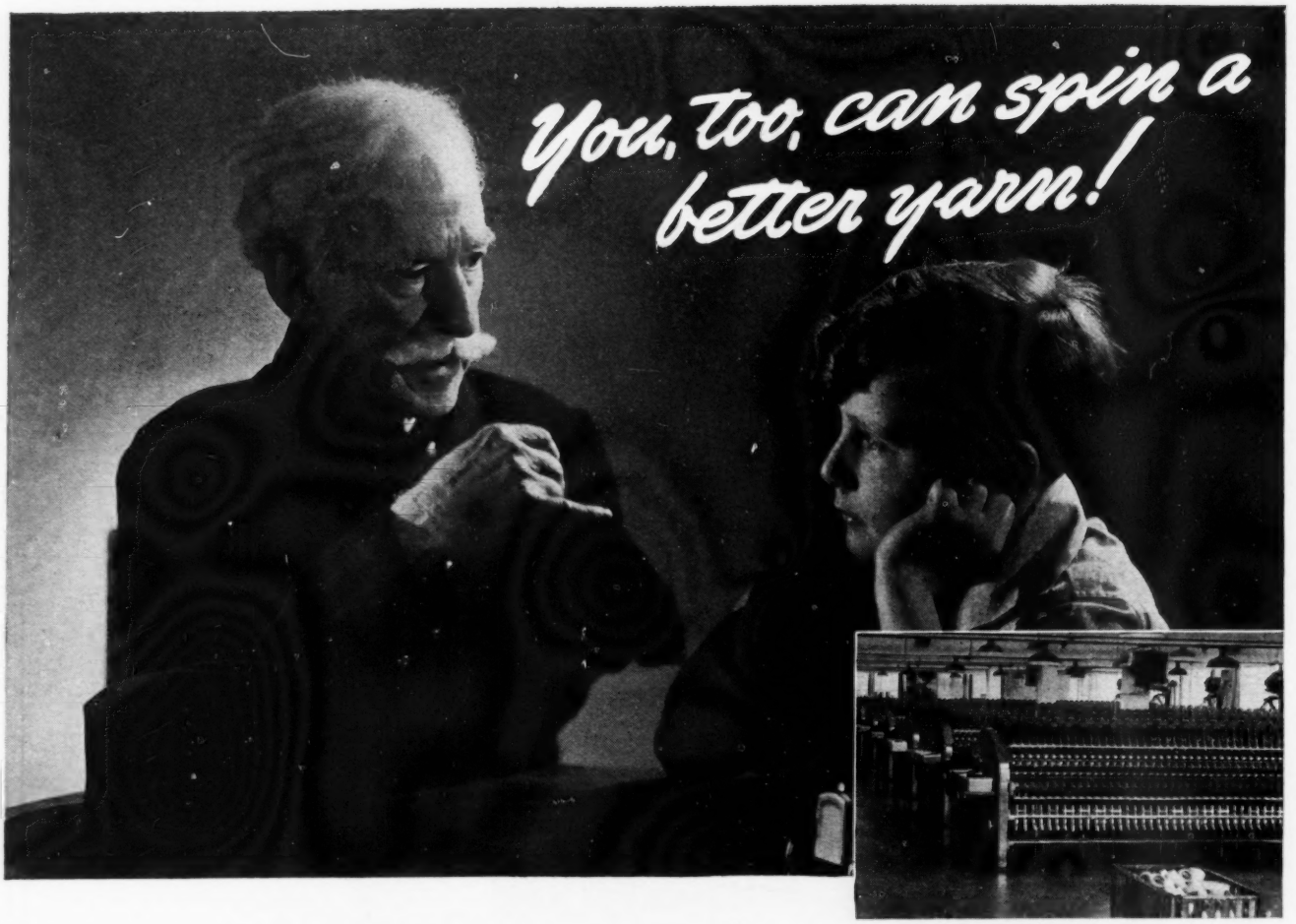


BETTER as to uniformity and smoothness . . . better as to cost!

Throughout the textile industry, millions of modern high-speed spindles are properly cushioned to save power . . . and spin higher quality yarn . . . lubricated with *Texaco Spindura Oils.*

Texaco Spindura Oils stubbornly resist oxidation, sludge formation, "fogging." They prevent vibration, hunting and lagging. There are 7 viscosity grades of *Spindura*—for every type and size of spindle and operating condition.

The outstanding performance that has made Texaco preferred in the fields listed in the panel has also made it preferred by prominent textile mills throughout the country.

A Texaco Lubrication Engineer will gladly cooperate in bringing similar benefits to your mill . . . just phone the nearest of more than 2300 Texaco distributing plants in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York, N. Y.

BALL AND ROLLER BEARING MANUAL—a helpful 44-page booklet on bearing construction, installation and lubrication. Yours for the asking.

SPINNING FRAMES in Jantzen Knitting Mills, Portland, Oregon. Running at 7000 r.p.m., cap spindles stay cool, save power, lubricated with TEXACO.

THEY PREFER TEXACO

★ More revenue airline miles in the U. S. are flown with Texaco than with any other brand.

★ More buses, more bus lines and more bus-miles are lubricated with Texaco than with any other brand.

★ More stationary Diesel horsepower in the U. S. is lubricated with Texaco than with any other brand.

★ More Diesel horsepower on streamlined trains in the U. S. is lubricated with Texaco than with all other brands combined.

★ More locomotives and cars in the U. S. are lubricated with Texaco than with any other brand.

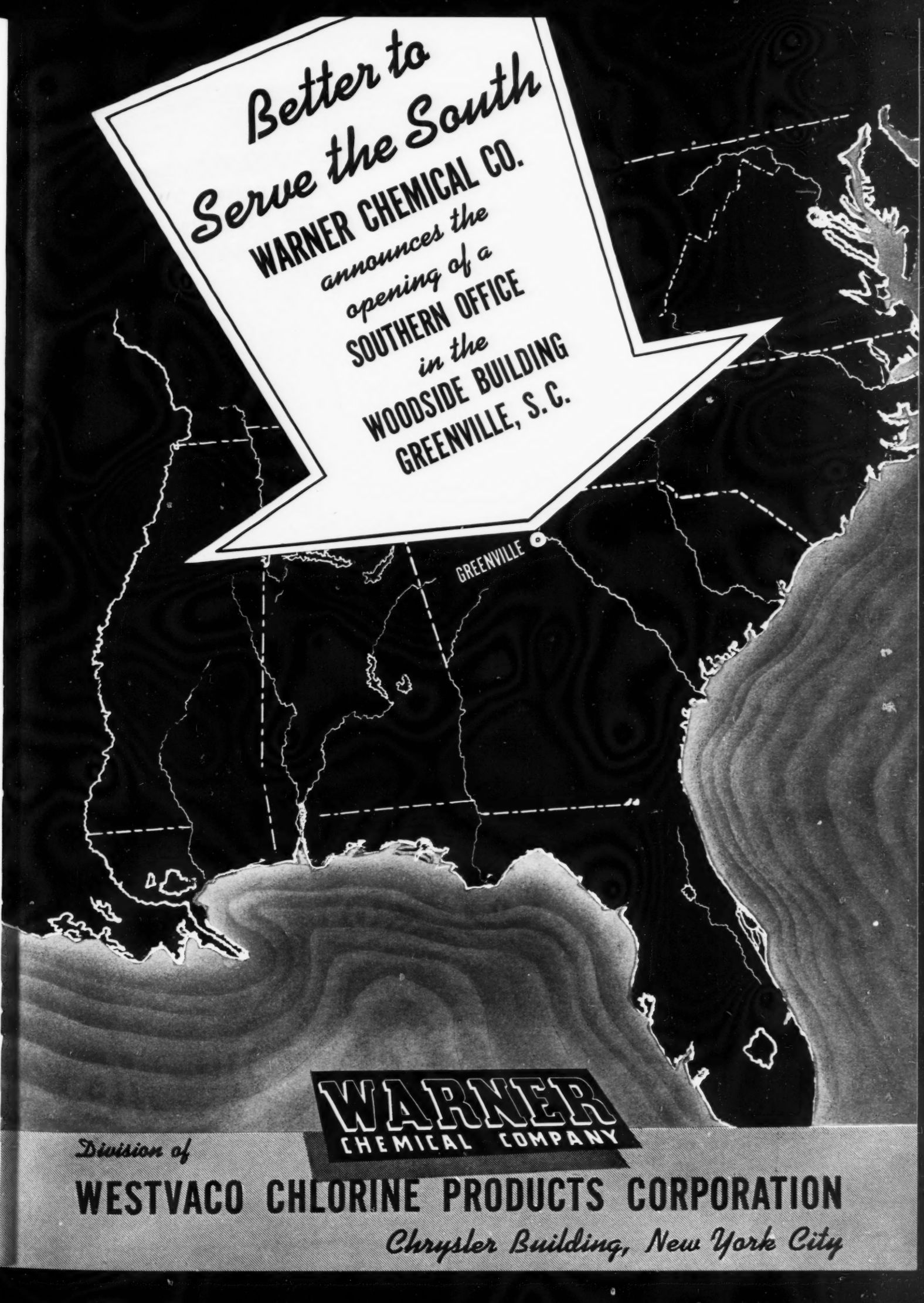
•

TUNE IN: All-star radio program. Every Wednesday night, Columbia Broadcasting System, 9:00 E.D.T., 8:00 E.S.T.; 8:00 C.D.T., 7:00 C.S.T.; 6:00 M.S.T.; 5:00 P.S.T.

TEXACO

TEXACO Lubricants

FOR THE TEXTILE INDUSTRY


Better to
Serve the South
WARNER CHEMICAL CO.
announces the
opening of a
SOUTHERN OFFICE
in the
WOODSIDE BUILDING
GREENVILLE, S.C.
GREENVILLE
WARNER
CHEMICAL COMPANY
Division of
WESTVACO CHLORINE PRODUCTS CORPORATION
Chrysler Building, New York City

Four-Year Record

NO SLIP
NO STRETCH
NO SHUTDOWN

BACK in 1937, a large southern textile cordage mill was being put to considerable expense and no little annoyance in belting its cord polisher machine. In addition to the usual dust and lint problem, the situation was further complicated by excessive slip and stretch, caused by the accumulation of polishing paste on the pulling surfaces of the belts. Result was that leather and fabric belts failed with discouraging frequency.

Then, just four years ago, the management called upon the G.T.M. – Goodyear Technical Man – to suggest a way out of the difficulty. He recommended that a Goodyear COMPASS "30" be installed.

Today this COMPASS Belt is still in service and looks good enough to go on for several years more. But that's not all. It hasn't slipped or stretched, and not once during the entire period was there a shutdown for repairs. Naturally, output increased accordingly.

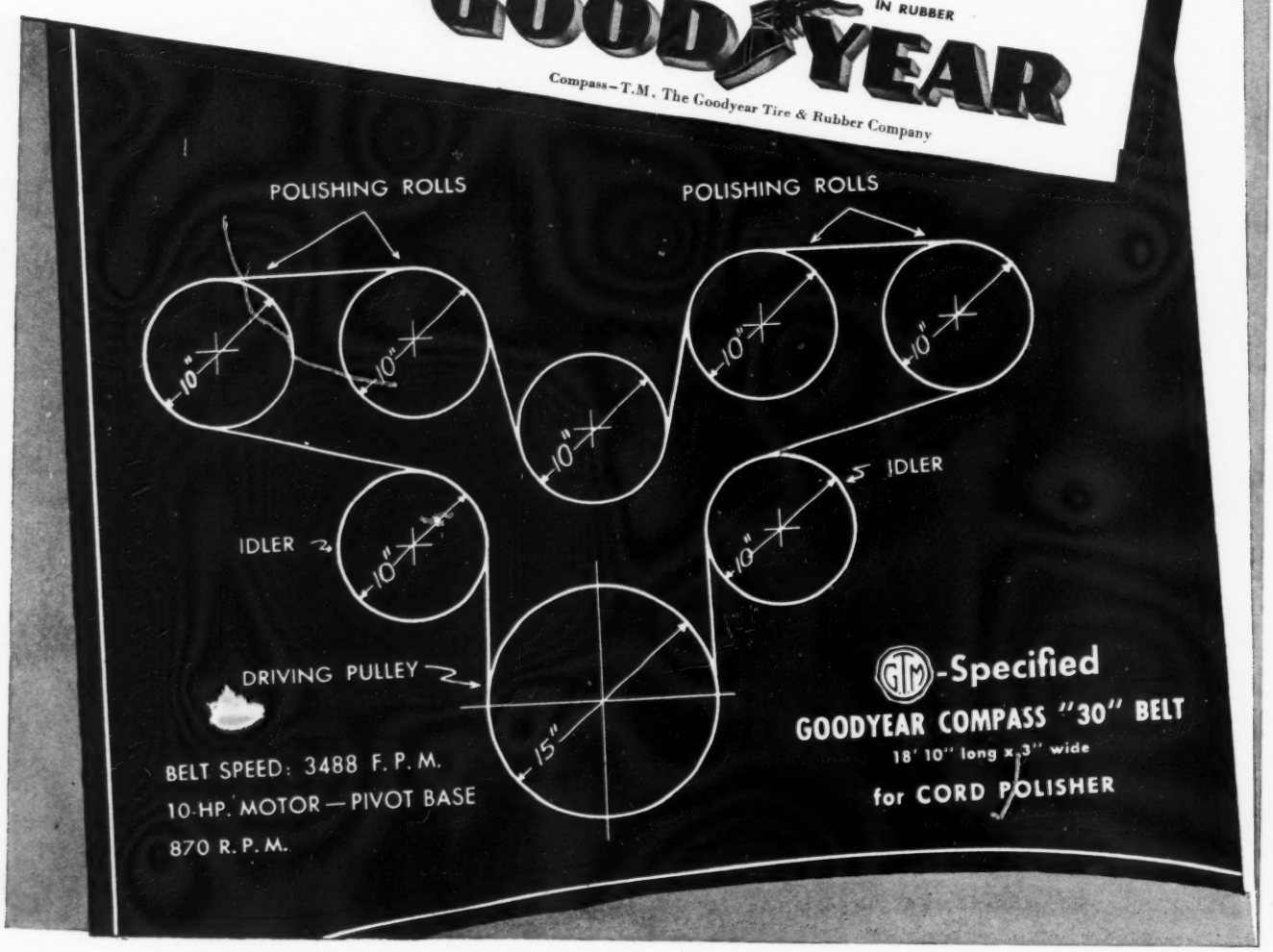
If you've got exasperating belt problems on your hard drives, why not find out what the COMPASS can do for you? The

G.T.M. will be glad to give you all the necessary information. To get in touch with him, write Goodyear, Akron, Ohio or Los Angeles, California—or phone the nearest Goodyear Mechanical Rubber Goods Distributor.

THE GREATEST NAME IN RUBBER

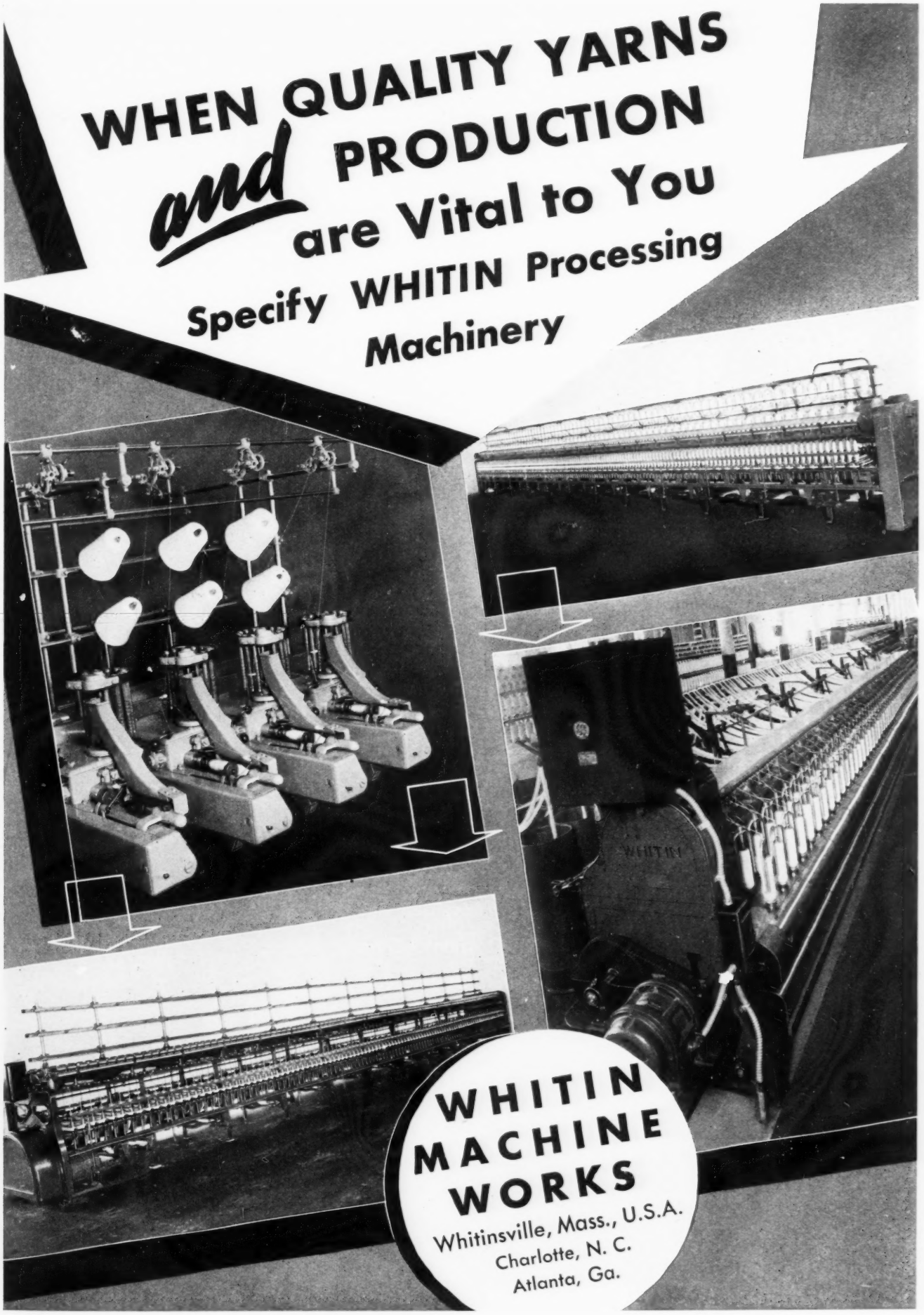
GOODYEAR

Compass—T.M. The Goodyear Tire & Rubber Company



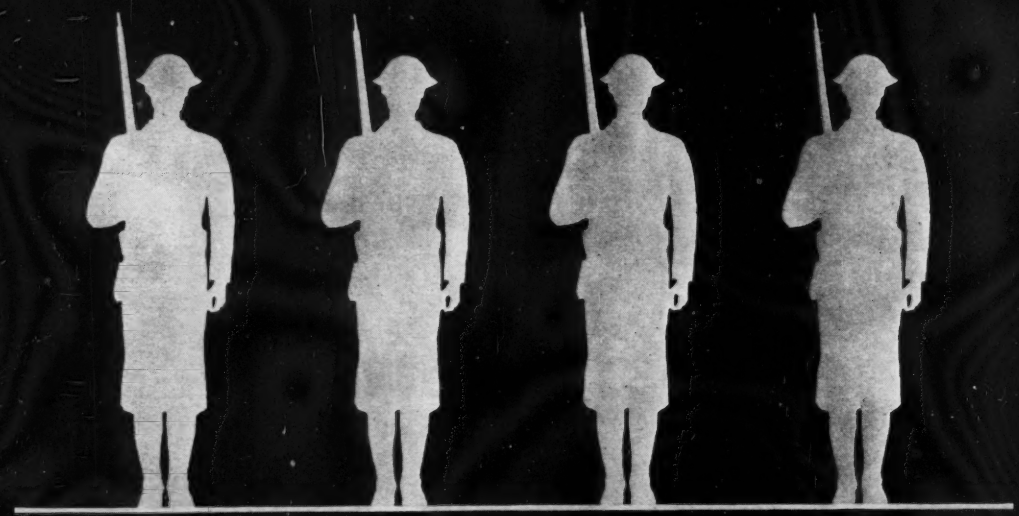
WHEN QUALITY YARNS *and* PRODUCTION are Vital to You

Specify WHITIN Processing Machinery



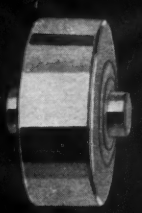
WHITIN MACHINE WORKS

Whitinsville, Mass., U.S.A.
Charlotte, N. C.
Atlanta, Ga.



Speeding Textiles for Defense

These most recent "new departures" mean faster production of clothing and other fabrics for the military — faster production, because these specialized bearings assure higher machine speeds, less maintenance expense and an end to lubrication troubles. Thus, they contribute to the comfort and health of our citizen soldiers — these textile machinery bearings of quality. New Departure, Division of General Motors, Bristol, Connecticut



New Departure

THE FORGED / STEEL BEARING

a Streamlined Floor MAKES FOR EFFICIENCY

Ford Adds to Workers Comfort With Maple

More and more, industrial surveys prove that as the working day advances, workmen's errors and accidents increase, due to fatigue — and that workers' comfort and production go hand in hand.

In units like this one at Ford Motor Company — the machine shop of the Engineering Laboratory — minutes lost today may mean days later on. So Ford gives these workers every energy-conserving aid — advanced machine equipment, a building glowing with light — and underfoot, a clean, comfort floor of Maple.

Maple is a floor that takes abuse with any, and yet is *comfortable.* So warm, dry, and resilient, it prevents loss of body warmth through conduction, protects workers' energy every precious minute. So smooth, too, that it speeds up traffic — both men and materials move with less effort. It saves minutes, saves energy, saves feet, saves nerves — steps up production, while its long life protects your flooring investment.

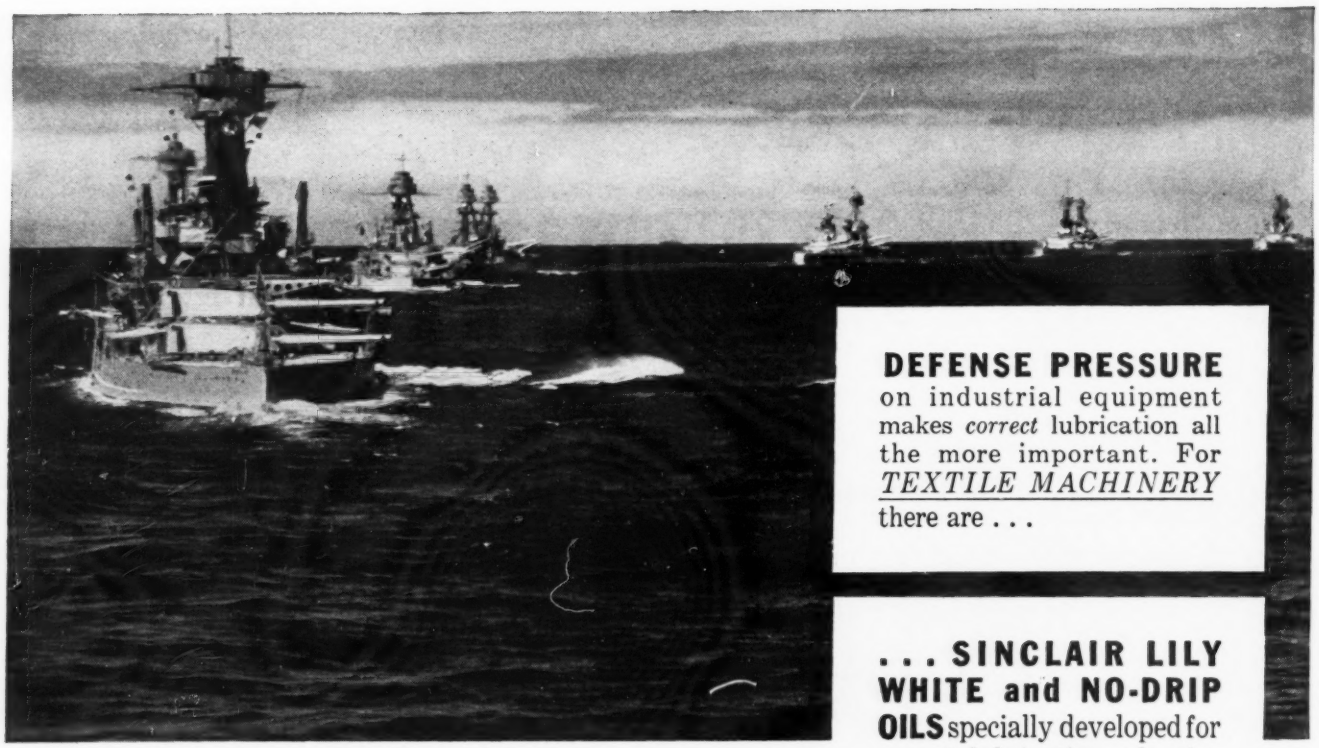
That's why today, you'll see Hard Maple floors being laid even in heaviest-duty plants. Before *you* build or remodel, ask your architect about **MFMA** Northern Hard Maple, in strips or blocks.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
1794 McCormick Building, Chicago, Illinois

Floor *with* MFMA Maple

REG. U. S. PAT. OFF

(NORTHERN HARD)



DEFENSE PRESSURE on industrial equipment makes *correct* lubrication all the more important. For *TEXTILE MACHINERY* there are . . .

. . . SINCLAIR LILY WHITE and NO-DRIP OILS specially developed for *correct* lubrication of spindles, top rolls, and comb boxes . . . also oils for *knitting machinery*. Get details from nearest Sinclair office, or write Sinclair Refining Company, 630 Fifth Avenue, New York, N. Y.

Write for "The Service Factor"—a free publication devoted to the solution of lubricating problems.

SACO LOWELL *long draft spinning frames in plant of D. C. Converse Co., Glendale, S. C. Lubricated with Sinclair Lily White Oil.*

SINCLAIR TEXTILE LUBRICANTS

SINCLAIR REFINING COMPANY (Inc.)

2540 West Cermak Road, Chicago • 10 West 51st Street, New York City • 1907 Grand Avenue, Kansas City • 573 West Peachtree Street, Atlanta • Fair Building, Ft. Worth

Could You compete in a PRICE CONTROLLED MARKET with your present operating costs

PROFIT CONTROL TO BE BASED ON PRODUCTION OF AVERAGE MILL
HENDERSON CALLS COMBED CEILING A TRADE BENEFIT
THREATENS COMBED COTTON PRICE CURB
HENDERSON HOLDS HIS MAIN AIM IS TO MAXIMIZE OUTPUT
Chicago, May 26.—American industry will be called upon and in the very much nearer future than is gen

Price control, however disturbing to the textile industry, will be less serious to some mills than to others. For even though a ceiling is fixed on prices . . . and profit margins "based on what the *average* mill can do" . . . progressive mills will be in a more advantageous position to maintain their earnings through increased production and sales.

In the mill where modern, efficient and dependable equipment is in operation — where waste, lost production and spoilage are at a minimum—price control will not be a complete handicap to profits.

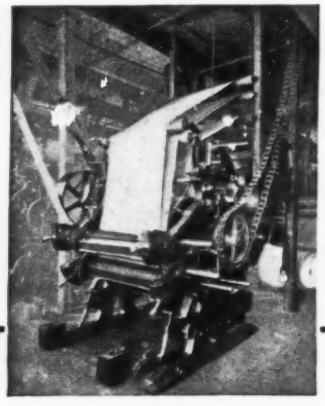
Mills operating Saco-Lowell Controlled Draft Units in Drawing, Roving and Spinning are well equipped to meet such emergencies. With the most efficient of modern machinery, these mills are ready to step up production without sacrificing quality and without excessively increasing power, upkeep and operating costs.

If you are now operating equipment of uncertain efficiency our engineers will show how a modernization program at this time can be made a sound and profitable investment.

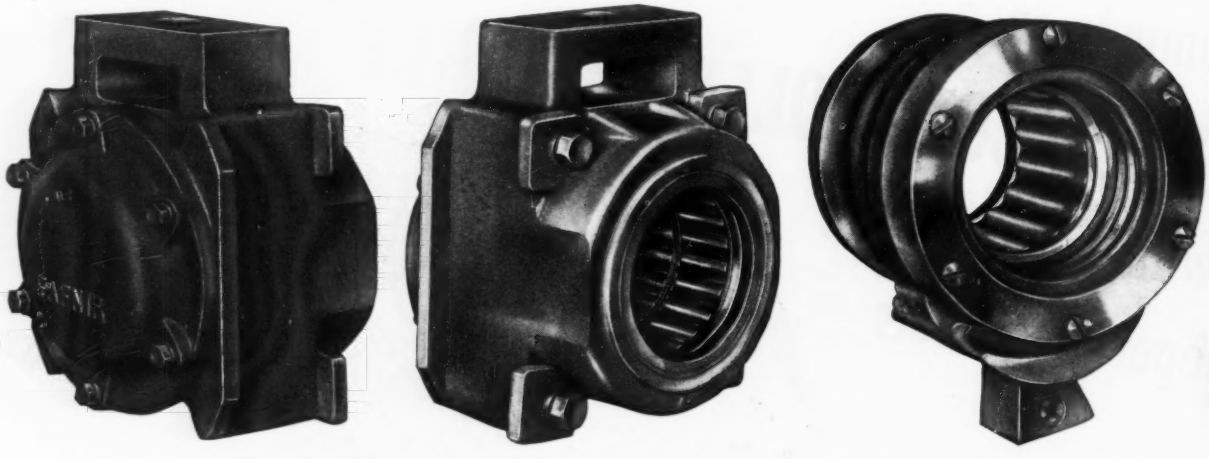
SACO-LOWELL SHOPS

60 BATTERYMARCH STREET, BOSTON, MASS.

Charlotte, North Carolina Greenville, South Carolina Atlanta, Georgia



Put the "Squeeze" on your Printing Machines!



MAIN CYLINDER BEARINGS

MANDREL BEARING

THESE NEW FAFNIR BEARINGS RUN COOL, SAVE POWER, STAND UP!

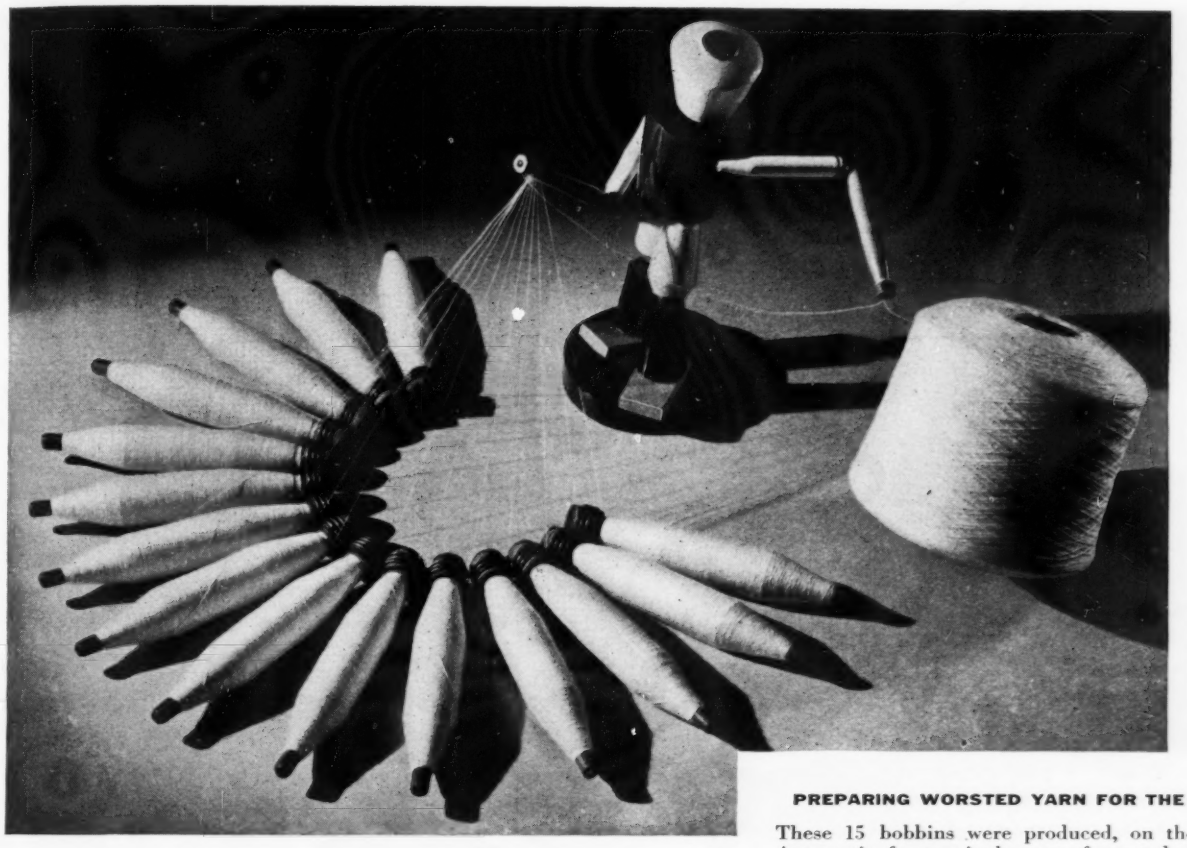
One of the big "trouble spots" of printing machines is eliminated with the introduction of these Fafnir Roller Bearing Units. Easily installed in place of your present plain bearings, they cut power bills substantially and make possible increased speeds. Grease-lubricated, they can't leak oil. They eliminate completely expensive time-out for repairs. And permit you to do a better printing job.

In the mandrel bearing's unique design, Fafnir started with the space limitations imposed by printing machine design, and within these close dimensions, built a high-capacity, self-aligning bearing that handles the job to a T. A full complement of large rolls carries the heavy load effortlessly, running in an alloy steel forging which acts as the outer race. In addition, a ball-thrust bearing takes loads created by sidewise adjustment.

Eliminate stops and costly repairs! Make your printing machines free rolling and clean with these new Fafnir Roller Bearing Units. Write for full details, and your copy of the Fafnir Textile Catalog. The Fafnir Bearing Company, New Britain, Conn. Atlanta . . . Birmingham . . . Boston . . . Charlotte . . . Dallas.

FAFNIR *Ball Bearings*

THE BALANCED LINE • MOST COMPLETE IN AMERICA



PREPARING WORSTED YARN FOR THE SHUTTLE

These 15 bobbins were produced, on the Universal Automatic, from a single cone of worsted yarn.

When it is desirable to have all imperfections removed, the yarn can first be wound onto cones or tubes, using the No. 60 Winder with Slub Trap Attachment. The two feeler blades, set at right angles, will stop the spindle without breaking the yarn, permitting the operator to pick off the imperfection or break out the slub and tie a knot.

If such careful inspection is not required, large packages can be produced on the Roto-Coner*, with the yarn passing through a single or double Slub Catcher.

*Reg. U. S. Pat. Off.

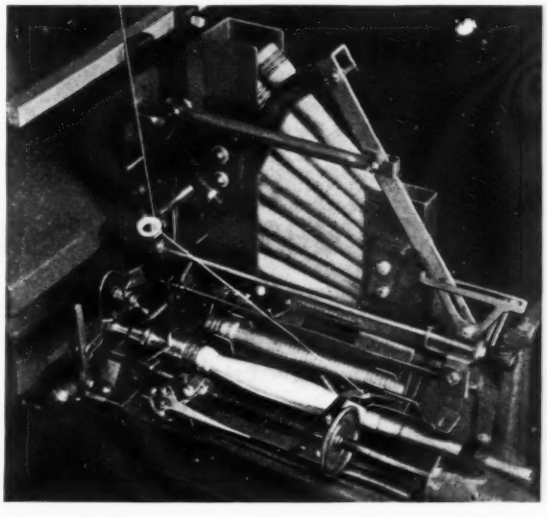
UNIFORMLY-WOUND BOBBINS FROM THE UNIVERSAL AUTOMATIC

In designing the Universal Automatic Bobbin Winder, our engineers aimed not only at lower winding *cost*—but also at improved winding quality.

A rotating cam and positive gear drive make possible spindle speeds of approximately 5,000 r.p.m. This cam also produces a layer lock wind, reducing the tendency of the yarn to "shell off" in the shuttle.

The Traverse Mechanism accurately controls the diameter of the bobbin and unvaryingly insures bobbins having maximum yardage for the capacity of the shuttle.

Any textile fibre can be wound on the Universal Automatic.

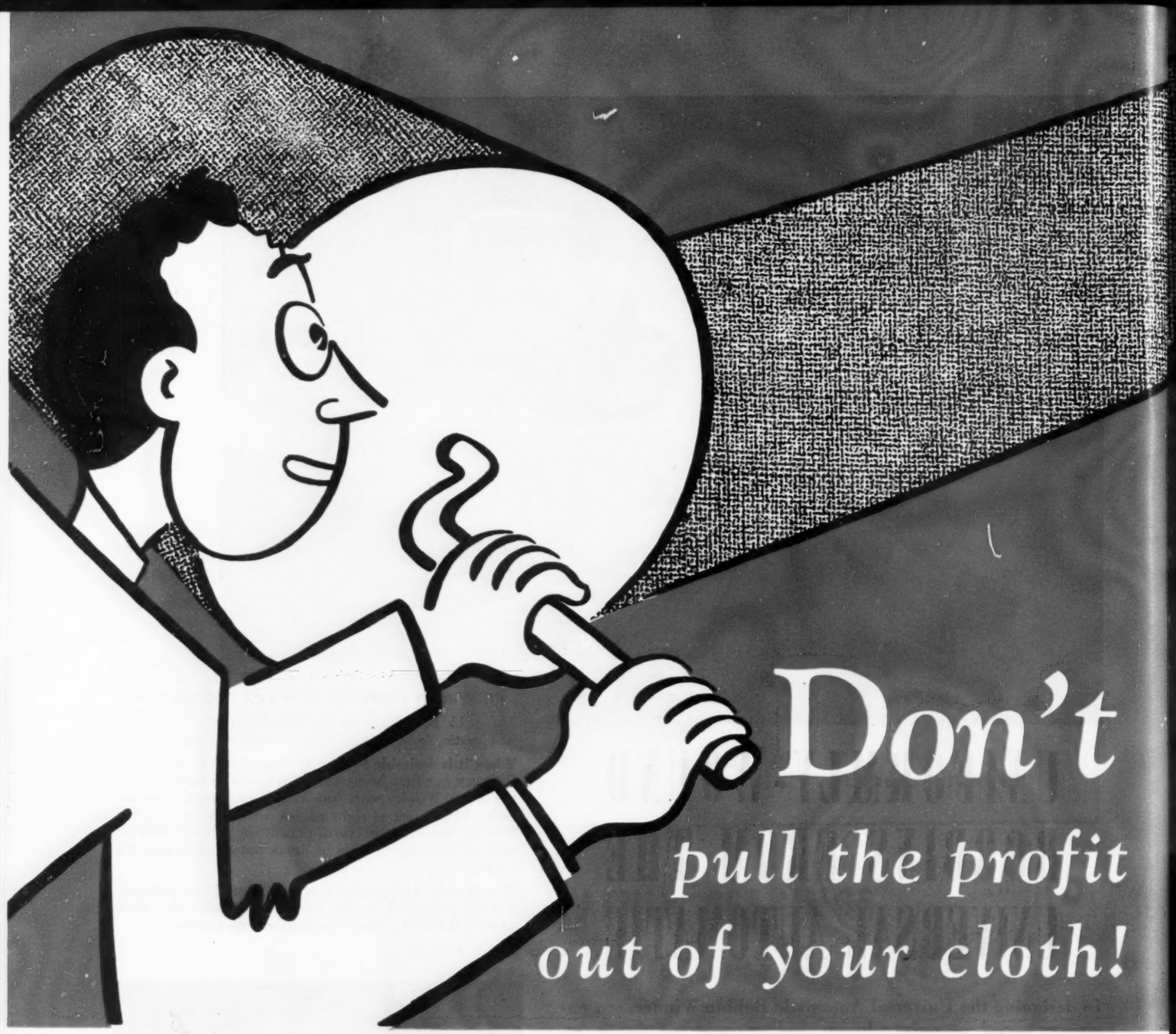


Closeup of Universal Automatic showing rugged construction

See our General Catalog in TEXTILE YEARBOOK

UNIVERSAL WINDING COMPANY

PROVIDENCE · Boston · Philadelphia · Utica · Charlotte · Atlanta



How a New Uniform-tension Dyeing Drive Provides Protection against Uneven Dyeing

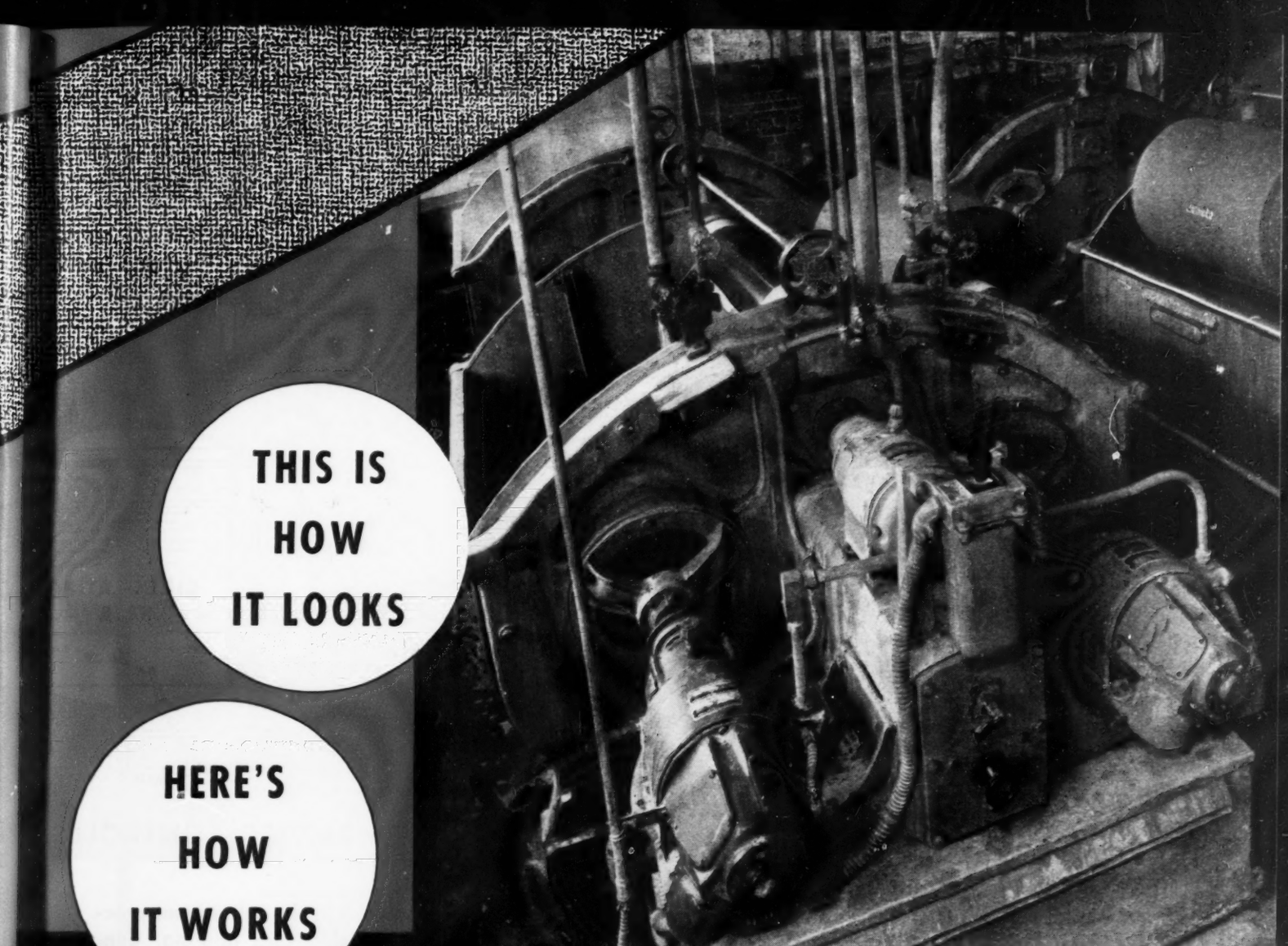
IF YOU have had difficulty maintaining uniform tension in your dyeing process, you will be interested to know how the Duo-dyeing Company solved this problem. It may help you increase your profit by preventing defective dyeing that results in rejects and returned material.

The Duo-dyeing Company, in developing its new Duo-dyeing machine, realized that any mechanical drive on a dyeing machine, even though constantly attended by an expert operator, may produce a high percentage of defective dyeing because of variations in tension. They asked our application engineers to help them work out an electric drive that would assure *uniform tension*. We did.

Our engineers developed a new dyeing drive that assures uniform tension on the cloth from the first to the last inch. The operator can now attend several machines, because the drive is made automatic by a system of G-E control. Application of power and braking is so timed by this control that the cloth is held firmly and is not allowed either to slack or to be unduly stretched.

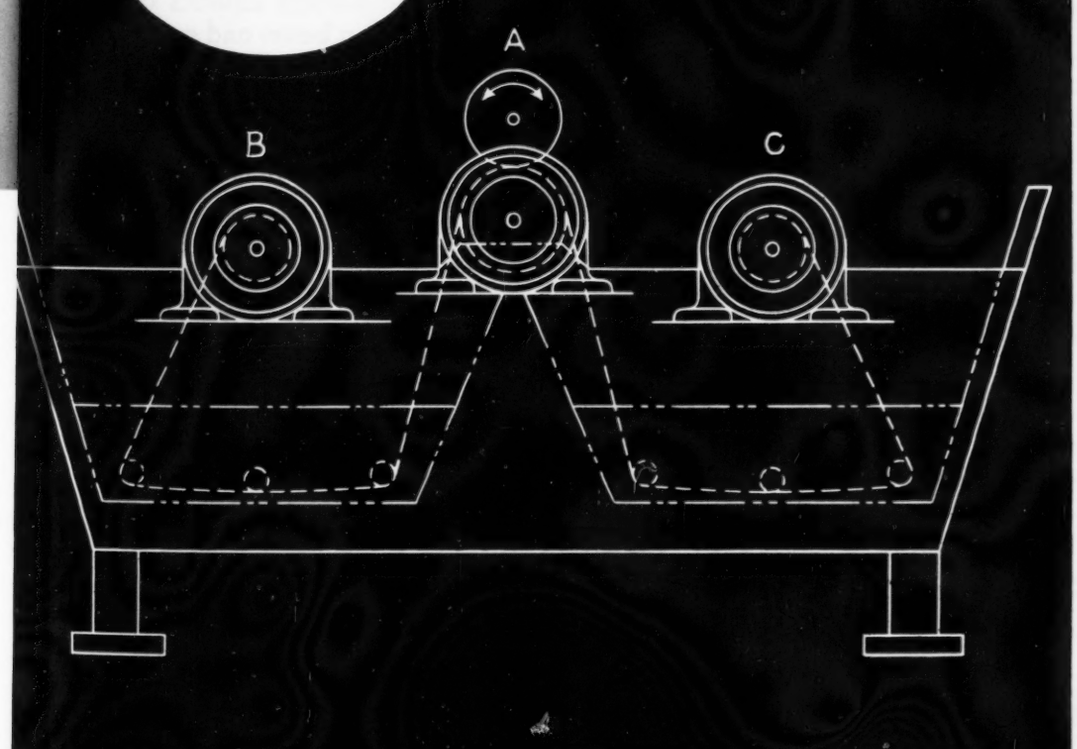
The machine for which this drive was perfected is now available for purchase from the Duo-dyeing and Machine Company, of Charlotte, N. C., and the Smith-Drum Company of Philadelphia, Pa.

This is just one service that G-E application engineering has rendered to the textile producer. Call upon us if you have a problem. Either contact your G-E representative or write direct to General Electric Co., Schenectady, New York.



THIS IS HOW IT LOOKS

HERE'S HOW IT WORKS



THE CLOTH IS PROPELLED

at constant speed (about 80 yd a minute) by the squeeze rolls (A), one steel and the other rubber-covered, which are driven by a constant-speed, Type K $\frac{3}{4}$-hp gear-motor, direct-connected to the steel roll.

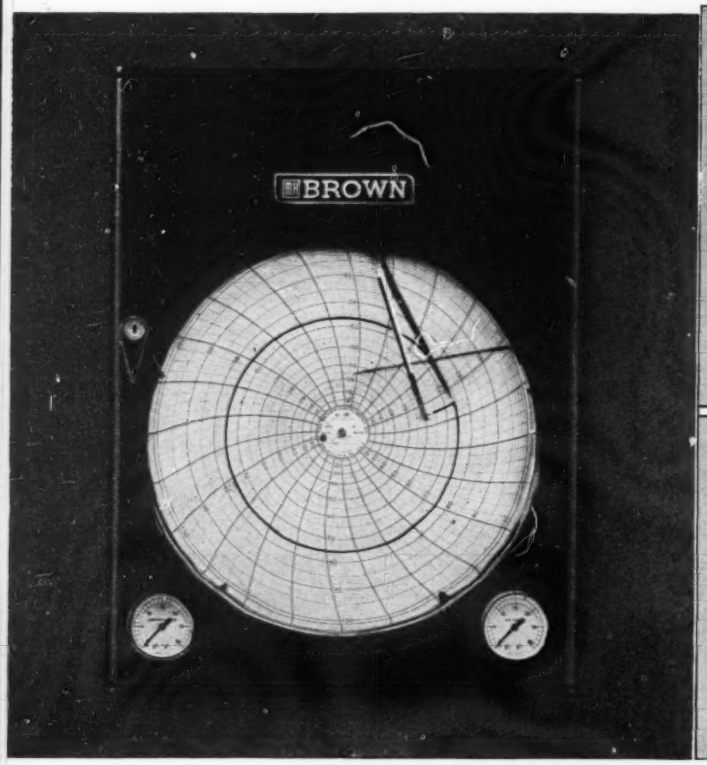
Winding and unwinding are accomplished at constant tension by means of wound-rotor induction motors, one direct-connected to each of the winding rolls (B and C).

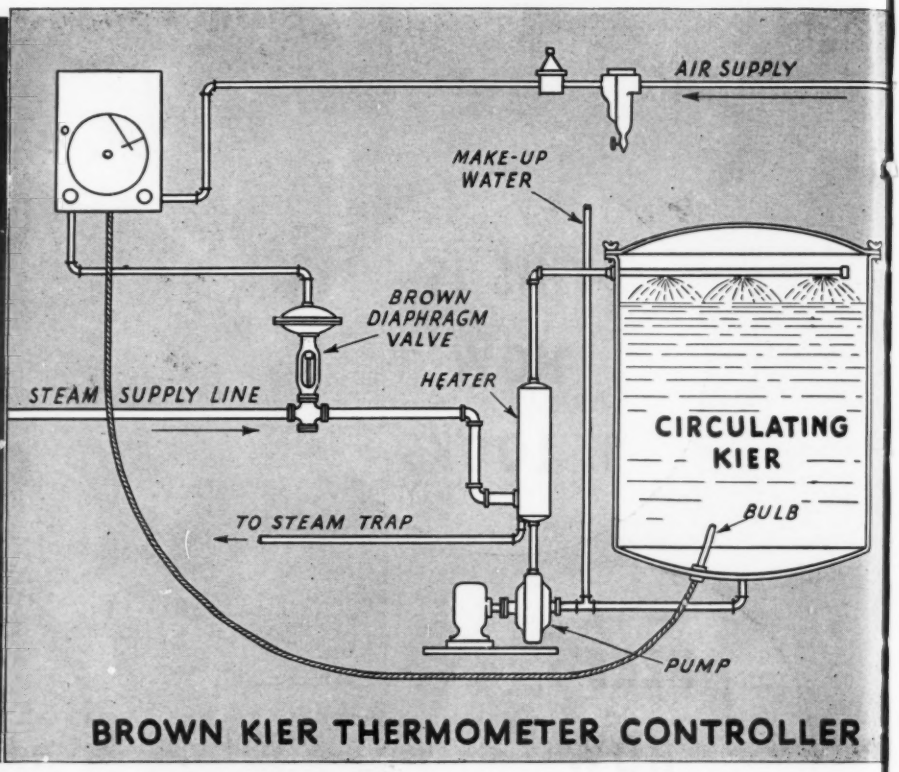
During winding, the motor torque increases and the speed of the roll decreases as the roll diameter increases. The rate at which the torque increases is controlled automatically to suit the diameter change, providing constant and uniform tension—of any desired degree—on the cloth.

GENERAL ELECTRIC

661-11-0623

Here's the Answer to
BLEACHING PROBLEMS





BROWN KIER THERMOMETER CONTROLLER

The above diagram shows a Brown Recording Thermometer Controller (air-operated throttlor) applied to a circulating kier.

Good bleaching is nine-tenths good boiling. If the boil is imperfect—the bleach may look well at first, yet it will become discolored and lose its clear tone.

Throughout the boil—the "crux" of the bleach is temperature—it must be held constant to obtain uniform treatment of the goods. Haphazard hand adjustments of the steam valve cause costly and serious damage.

The correct temperature varies with different goods. Once this temperature has been determined it can easily be maintained and duplicated at any time with the aid of Brown Recording Thermometer Controllers.

Chart Records from Brown Recording Thermometer Controllers furnish a complete picture of every boil. They show the constant temperature of the liquor—length and time of boil—and the required time it took to bring the kier up to the set temperature.

In plants where Brown Recording Thermometer Controllers are installed, the savings have repaid the investment many times over.

Less trouble is encountered in the subsequent processing of dyeing, mercerizing and printing. Considerable steam is saved and weaker caustics are used. Goods are produced with a better and a more lasting finish when Brown Recording Thermometer Controllers are put in charge of kiers.

You can rely on their precision . . . be confident of their dependable control to eliminate harshness and liquor stains.

Send for Catalog No. 9304

This catalog fully describes the complete line of Brown Instruments and Minneapolis-Honeywell Controls for measuring and controlling moisture content, size cooking, bleaching, mercerizing, dyeing and other textile processes. Write

THE BROWN INSTRUMENT COMPANY
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR CO.
4492 Wayne Avenue, Philadelphia, Pa.

Offices in all principal cities. Toronto, Canada: 117 Peter Street — Amsterdam-C, Holland: Wijdesteeg 4 — England: Wadsworth Road, Perivale, Greenford, Middlesex — Stockholm, 16, Sweden: Nybrokajen 7.

BROWN THERMOMETER CONTROLLERS
Products of
MINNEAPOLIS-HONEYWELL REGULATOR COMPANY

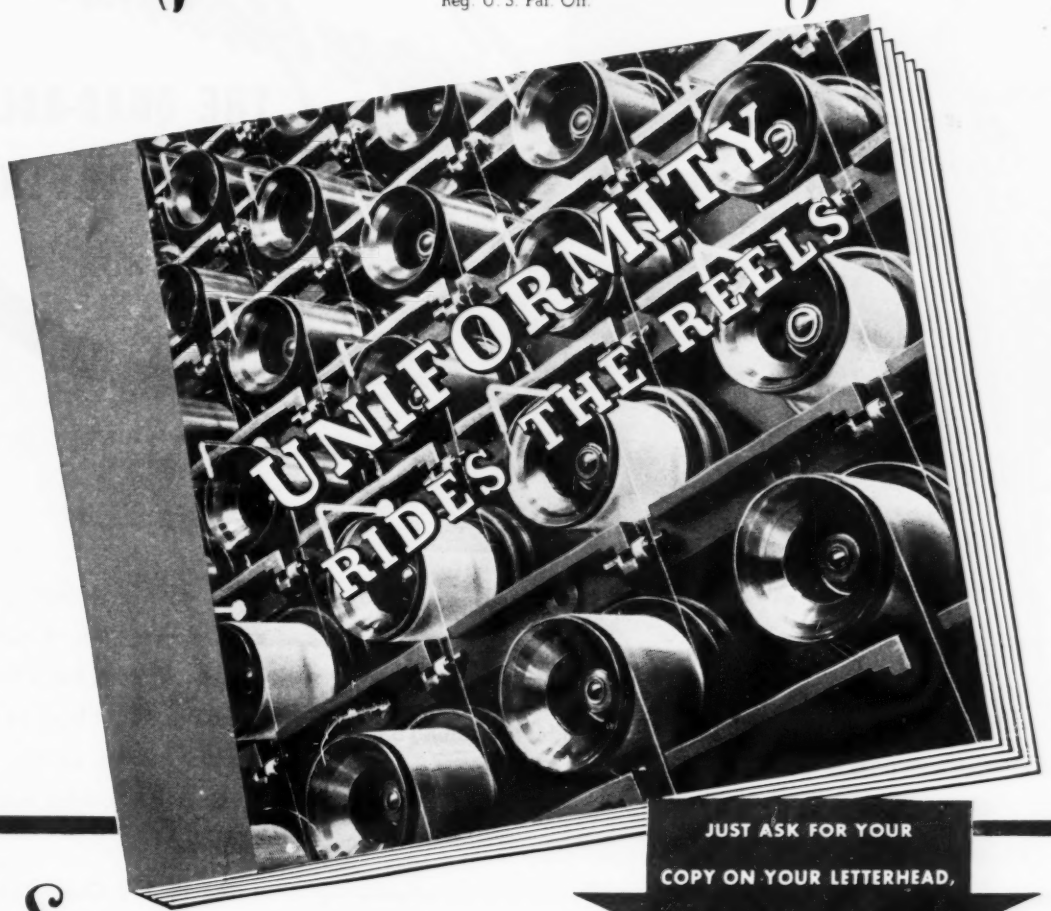
To Measure and Control is to Economize

READ THE STORY OF

"Continuous Process"

Spun-lo Rayon

Reg. U. S. Pat. Off.



JUST ASK FOR YOUR COPY ON YOUR LETTERHEAD, OR USE THIS COUPON

So MANY people have asked us about the "Continuous Process"—the whys and hows and wherefores—that we have prepared a special explanatory illustrated booklet on the subject. It's yours for the asking, just off the press, and explains in detail just how this revolutionary improvement in rayon yarn is achieved, and why it increases mill efficiency, runs faster with fewer breaks, dyes more evenly, cuts down loom stoppage, is virtually free of knots and broken filaments.

INDUSTRIAL RAYON CORPORATION • CLEVELAND, OHIO

NEW YORK OFFICE • 500 FIFTH AVENUE

Industrial Rayon Corporation, Dept. A.
500 Fifth Avenue, New York, N. Y.

Gentlemen:

Send me my copy of "Uniformity Rides the Reels", please.

Name_____

Firm Name_____

Address_____

City_____

Priced for Coarse Yarn Mills

THE QUAD-ROLL HIGH DRAFT ROVING SYSTEM

This high-draft roving system has all the advantages common to one process operation, is low enough in price to be practicable for any coarse yarn mill, and yet sacrifices nothing in yarn quality.

It drafts up to 16 on staples up to 1¼", utilizing our Patented Scroll Condenser (made of Bakelite to eliminate static). This Scroll gives the sliver a half turn of twist between the two drafting zones, folding in the outer fibres and producing a strong, uniform yarn. Other features include:

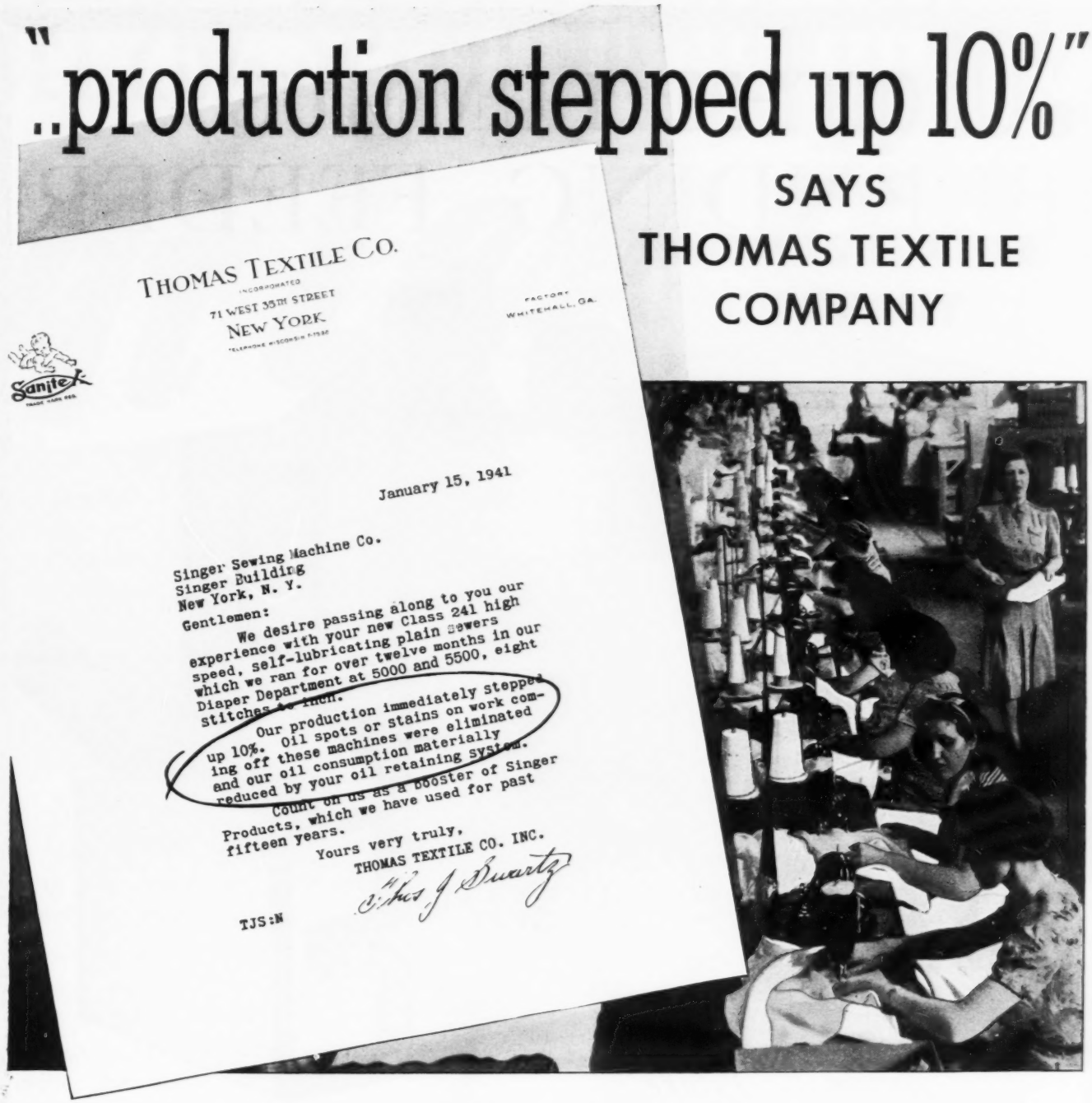
A rectangular serrated trumpet. This spreads the sliver for the first drafting zone and separates the fibres to improve drafting and reduce fly.

A new patented weighting system. This facilitates cleaning because of streamlining and fewer parts, and provides positive control of weight distribution. One weight controls 3 back lines of rolls, thereby eliminating the binding of multiple weights under the roller beam. Lubricating method saves oil by controlling distribution and increases life of roller covering. The weight hook has a finger grip for releasing weight load on rolls and the removal of the saddle. The stirrup design also provides maximum cleaning space.

The H & B Quad-Roll High Draft Roving System is now operating successfully in a number of mills. Let us recommend an installation to suit your conditions and requirements.

H & B AMERICAN MACHINE COMPANY
TEXTILE MILL MACHINERY
PLANT AT PAWTUCKET, RHODE ISLAND
BOSTON OFFICE: 161 Devonshire St.; ATLANTA OFFICE: 815 Citizen & Southern National Bank Bldg.; CHARLOTTE OFFICE: 1201-3 Johnston Bldg.
EXPORT DEPARTMENT: United States Machinery Co. 115 Broad St., New York, N. Y., U. S. A.

"..production stepped up 10%" SAYS THOMAS TEXTILE COMPANY



THOMAS TEXTILE CO.
INCORPORATED
71 WEST 35TH STREET
NEW YORK

FACTORY
WHITEHALL, GA.

Sanitex

January 15, 1941

Singer Sewing Machine Co.
Singer Building
New York, N. Y.

Gentlemen:

We desire passing along to you our experience with your new Class 241 high speed, self-lubricating plain sewers which we ran for over twelve months in our Diaper Department at 5000 and 5500, eight stitches to inch.

Our production immediately stepped up 10%. Oil spots or stains on work coming off these machines were eliminated and our oil consumption materially reduced by your oil retaining system.

Count on us as a booster of Singer Products, which we have used for past fifteen years.

Yours very truly,
THOMAS TEXTILE CO. INC.

Thos J Swartz

TJS:N

"Our production immediately stepped up 10% . . . Oil spots or stains were eliminated and oil consumption materially reduced."

The above letter illustrates a few of the reasons why leading manufacturers prefer the automatically lubricated Singer Class 241 machine for light and medium weight sewing.

Step up production in your plant by modernizing with this outstanding machine. Let us prove the exceptional performance of the Singer 241 by testing it in your own plant on your own work. The local branch of the Singer Manufacturing Trade Department will be glad to arrange such a test without obligation to you. Call your Singer Man today.

SINGER
SEWING MACHINE COMPANY
MANUFACTURING TRADE DEPARTMENT
149 Broadway, New York, N. Y.
Branches in all principal cities

SINGER SEWING MACHINES

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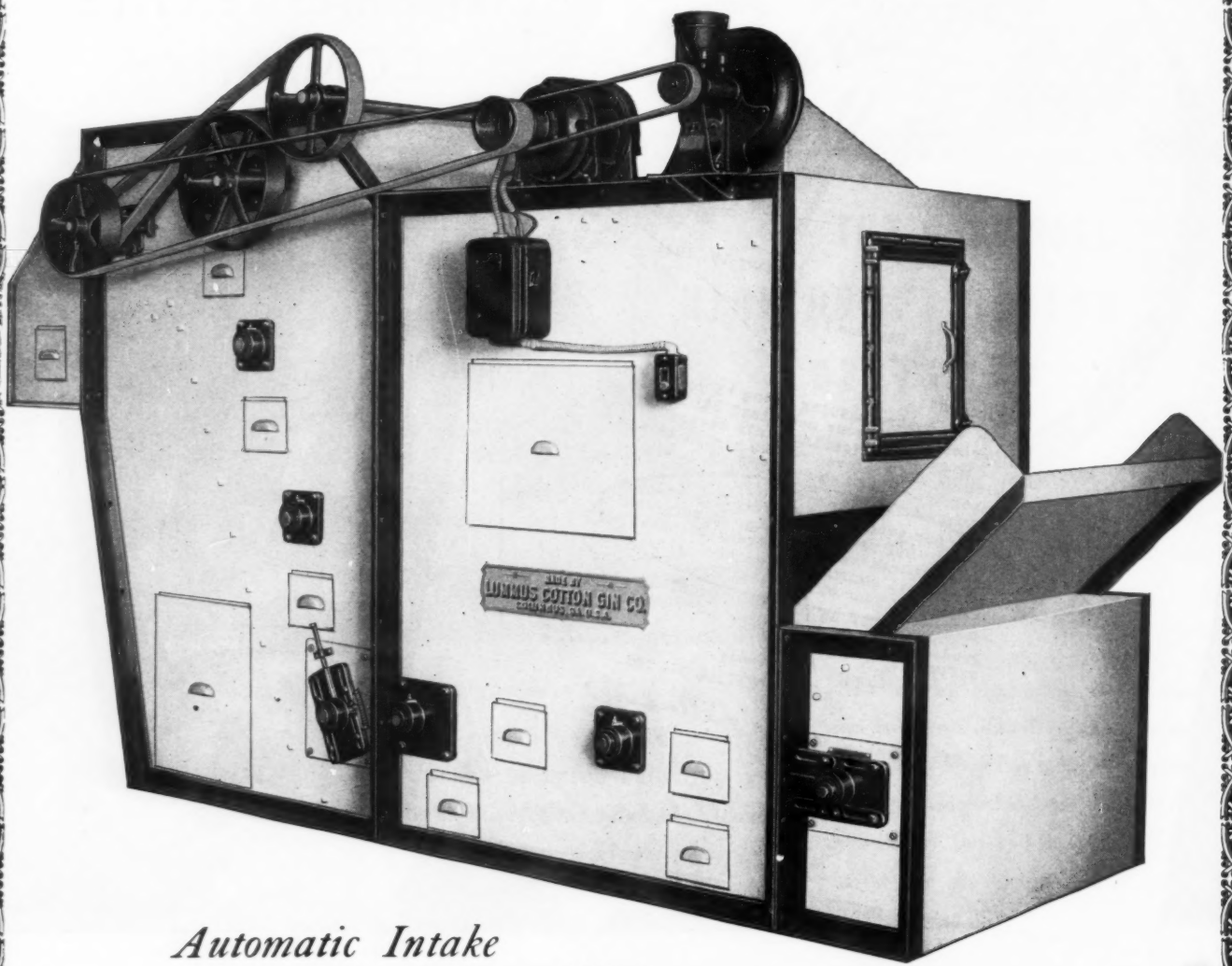
Singer Sewing Machine Company
149 Broadway, New York, N. Y.

Please send me a copy of the illustrated folder describing the Singer Class 241.

Name .....
Street .....
City and State .....

THE LUMMUS BLENDING FEEDER



Automatic Intake
Cannot be Overfilled
Improved Cleaning Grids
Individual Motor and Dust Fan
All Ball Bearing Throughout

Sold by

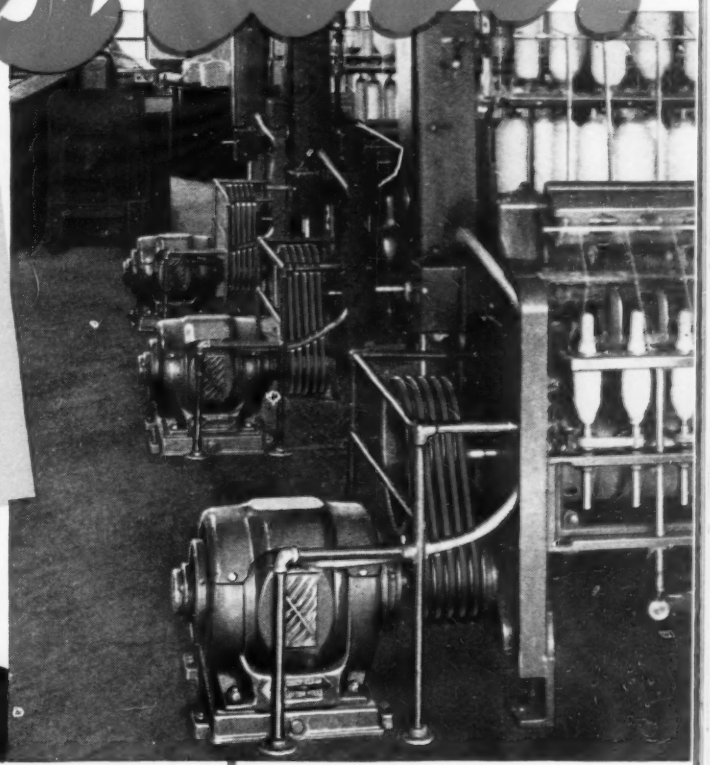
AldricH MachinE

Greenwood, **WorkS** South Carolina

GET 25% SPEED VARIATION

At Less Cost!

No Need for Multi-Speed Motors or Costly Speed Changing Devices. Get Up to 25% Speed Variation with Allis-Chalmers Vari-Pitch Texrope Drives!



YOU'D EXPECT to pay a lot *more* for the added flexibility of getting any speed you want on your mill machinery . . .

But when you use the new Allis-Chalmers Vari-Pitch Texrope Drives, you get this service . . . at real economy! For here's a line of drives that make unnecessary the purchase of costly multi-speed motors or complicated speed-changing devices.

The Allis-Chalmers Vari-Pitch Drive uses a simple yet highly practical principle that's a feature of the drive itself (see diagram in box at right). Speed changes are made quickly and easily . . . with no delay in production. What's most important, too—you get the *exact* speed to give your machines highest operating efficiency . . . even under changing conditions.

Up and Down Speeds for UPPED Profits!

If you want to UP your production . . . and your profits . . . get the complete story about Allis-Chalmers Vari-Pitch Drives . . . and how they can help you as they have helped scores of others.

The transmission engineer in the district office near you has an interesting set of operating facts on this subject to show you. Call him today. Or write Allis-Chalmers, Milwaukee, Wisconsin.

A 1418

How the Vari-Pitch Principle Works for you!

Adjusted for maximum diameter—high speed.

Adjusted for minimum diameter—low speed.

To get the speed you want, use Allis-Chalmers Vari-Pitch Drives — in capacities from fractional to 150-hp . . . with speed variations of 15 to 25% per sheave! In the stationary control type, speed changes are made by stopping motor and making a simple adjustment of the pitch diameter of the sheaves. In the motion control type, pitch diameters are adjusted while sheave is in motion.

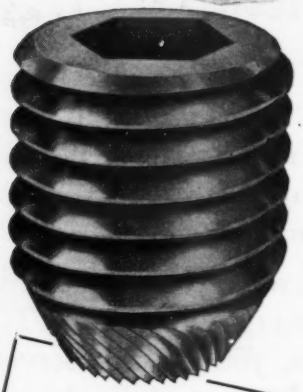
Vari-Pitch Speed Changers • Texrope V-Belts • Duro-Brace Texsteel Sheaves • Vari-Pitch Sheaves • Standard Cast Iron Sheaves • Adjustable Pitch Diameter Texsteel Sheaves • 2-3-4 Combination Sheaves • Paraline Automatic Motor Bases • Oil Field Drilling Rigs.

Belts by B. F. Goodrich

ALLIS-CHALMERS

MILWAUKEE·WISCONSIN

HOLDING POWER!



Famous for their ability to hold tight, "Unbrako" Self-Lockers are saving trouble and delays in many a mill.

Set them up with no more than average pull and the unique knurled points lock into place with a really dependable grip! No matter how severe the unwinding tendency, "Unbrako" Self-Lockers can't work loose. Yet they're removed as easily as applied and they can be used over and over again.

Merely by specifying "Unbrako" on your next order, you'll be insuring against costly trouble caused when ordinary set screws fail to hold. *Try it!*

UNBRAKO
Reg. U. S. Pat. Office
SELF-LOCKING
HOLLOW SET SCREWS
with the
KNURLED POINTS

STANDARD PRESSED STEEL CO.
JENKINTOWN, PENNA. EDX 582
— BRANCHES —
BOSTON • DETROIT • INDIANAPOLIS • CHICAGO • ST. LOUIS • SAN FRANCISCO

Reg. U. S. Pat. Office
UNBRAKO *Screw Products*

KEEP PRODUCTION

at

FULL uninterrupted SPEED

by

Using Loom Harness equipment that has been designed, engineered and scientifically manufactured for the warp thread being woven.

QUALITY LOOM HARNESS EQUIPMENT

Stehedco

products have built into them that something that spells dependability. Such products and policy have made four large plants necessary to take care of the demand for these Super Quality products. There is a Specialized Field Engineer in your district to assist and consult with you.

BRANCH OFFICES ALL OVER THE WORLD

Steel Heddle Mfg. Co.

Manufacturers of Superior

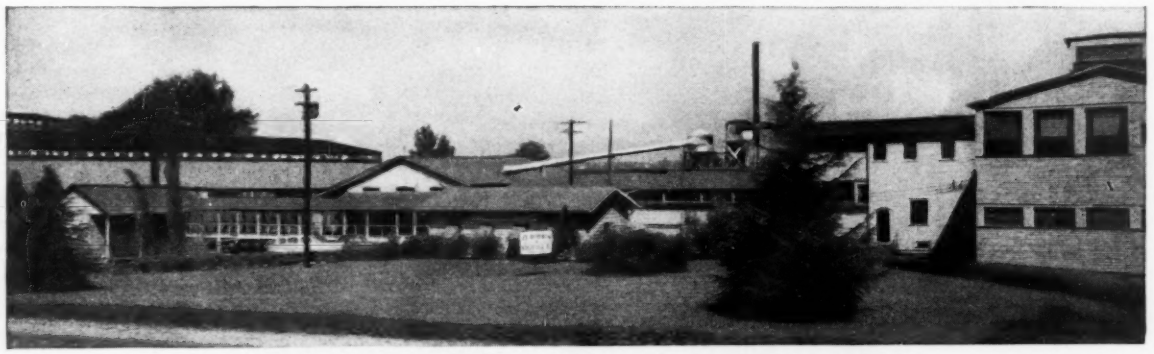
FLAT STEEL HEDDLES—HARNESS FRAMES—ALL TYPES OF LOOM REEDS—TEMPERED DOGWOOD SHUTTLES—LOOM HARNESS ACCESSORIES

2100 W. Allegheny Avenue Philadelphia, Pa.

FIELD ENGINEERS IN EVERY DISTRICT

SOUTHERN PLANTS OFFER
Prompt Service

These are days when you want and need good products and quick service. U S offers both from these southern plants—the only complete plants producing Automatic Loom Bobbins, Cardroom Bobbins, Warp Bobbins and Skewers in the south. Write, wire or phone for the nearest representative to call.



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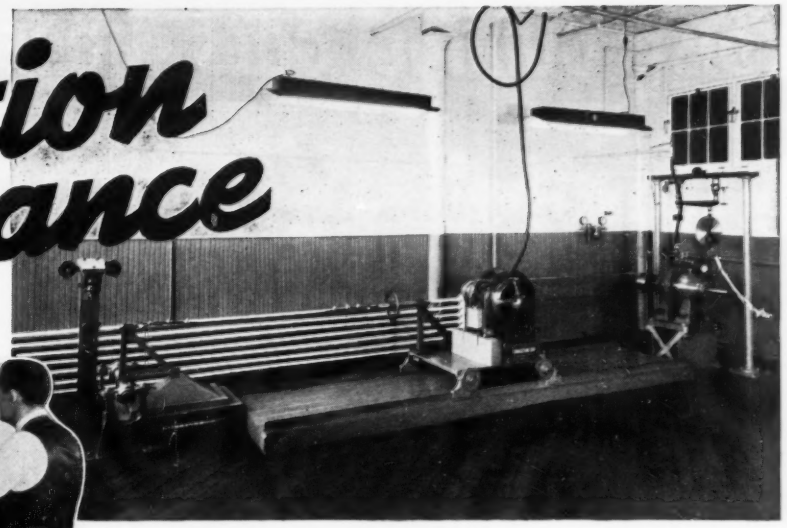
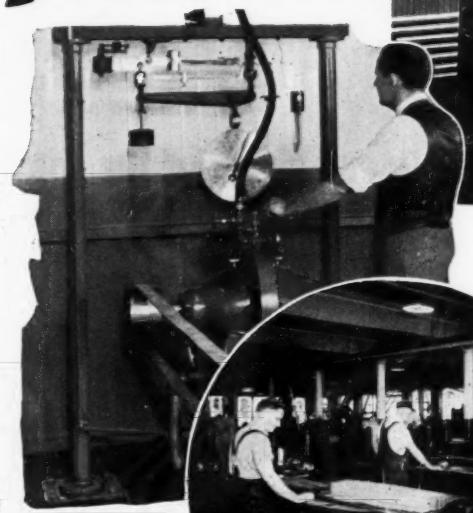
BETTER BOBBINS • SPOOLS • CONES • SHUTTLES

Production Insurance





Above and left---two views in Southern Belting's laboratory, where belts are constantly being tested.

Right---Battery of presses, where leather strips are joined into continuous lengths.

● SOUTHERN Belts are made by leather craftsmen with an average of over fifteen years' experience in belt construction. . . . They are then tested—in the South's most completely equipped laboratory—for quality of material and construction, tensile strength, grip and capacity. . . . You KNOW you're getting proven quality when you buy SOUTHERN belts.

Above---Cutting department. Adequate stocks of leather from our own tannery insure prompt filling of your order.

Large stocks of belting of all types and sizes, always ready for immediate shipment.

Southern Belting Company

Atlanta **Georgia**

Manufacturers and Warehouse Distributors

Leather Belting · Rubber Belting · V-Belts and Sheaves · Fiber and Metal Pulleys · Rockwood-Southern Pivoted Motor Drives · Reeves Variable Speed Transmissions

DISC GUIDING GOES MORE THAN HALF-WAY

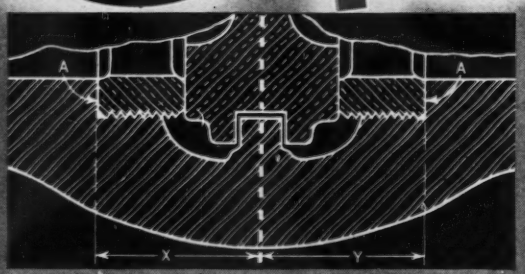
in LUNKENHEIMER IRON BODY GATE VALVES

THE GUIDE RIBS IN THE BODY AS WELL AS THE GUIDE CHANNELS IN THE DISC ARE ACCURATELY MACHINED.

No half-way measures go in manufacturing Lunkenheimer Iron Body Gate Valves. With disc guiding, for example, not only are the guide channels in the disc accurately machined, but *the guide ribs in the body as well*—to extremely close tolerances.

With this thorough method of disc guiding, thrust of the disc is always against guides and not against seat faces. Chattering and dragging on seats are eliminated assuring tight closure and longer seat and disc life. Fewer repairs and replacements are necessary, materially reducing maintenance expense, with resultant lower valve cost.

Lunkenheimer Iron Body Gate Valves also embody many other refinements which place them in a class above ordinary gate valves. Exceptionally heavy bronze seat rings; disc of true solid construction; new development in stem bronze with its extra resistance to wear; non-corrosive bearings at all points; uniform interchangeability of parts; dense sound castings of great strength; all of these features mean savings for the user in time and money over long periods of service.



The accurately machined guide ribs in the body are a positive center line for machining the shoulders against which seat rings are screwed into place. When renewing seat rings just screw them in—they're bound to fit perfectly—no scraping, lapping or machining necessary—then drop in the disc. That's how precision workmanship saves you time and money!

ESTABLISHED 1862

THE LUNKENHEIMER CO.

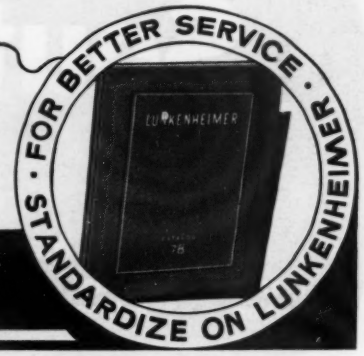
"QUALITY"

CINCINNATI, OHIO, U. S. A.

NEW YORK CHICAGO
BOSTON PHILADELPHIA

EXPORT DEPT. 318-322 HUDSON ST., NEW YORK

For full information on the complete line of Lunkenheimer Iron Body Gate Valves send for copy of Catalog 78.

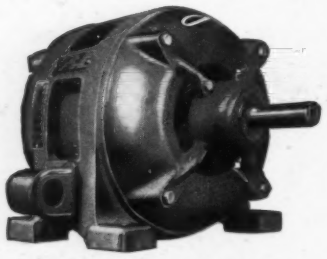


Buy from your local Lunkenheimer distributor! He is cooperating in every way to give you the kind of service you so vitally need for the National Defense Program.

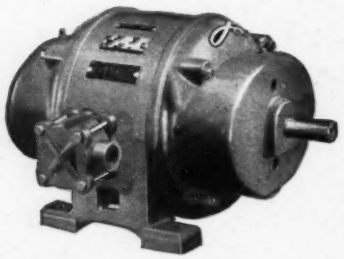
Evolution of The American Flag —
compliments of
The Louis Allis Co., Milwaukee, Wis.

LOUIS ALLIS

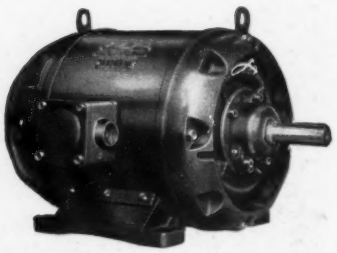
A Size and Type Electric Motor for Every Industrial Requirement



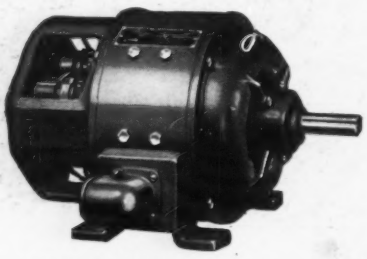
Standard open SQUIRREL CAGE polyphase motors are carefully engineered, precision built motors with rigid construction throughout and adequate insulation you can confidently apply to your toughest jobs.



SPLASH-PROOF motor. Designed and built from the ground up as a real splash-proof motor—full protection against acid spills—splashing liquids—high humidity. Completely protected by cast iron housing.

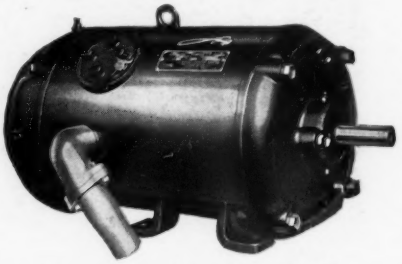


TOTALLY ENCLOSED FAN COOLED motors—for operation in atmospheres containing abrasive dust, corrosive fumes, dirt, oil, combustible dust, and similar conditions such as are usually found in machine shops, foundries, chemical plants, grain elevators, coal pulverizing plants, etc.

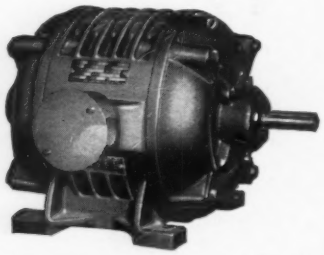


These DIRECT CURRENT motors are correctly engineered and precision built—available in a very wide range of both electrical and mechanical modifications. The extra rugged construction of these motors assures long life of dependable performance.

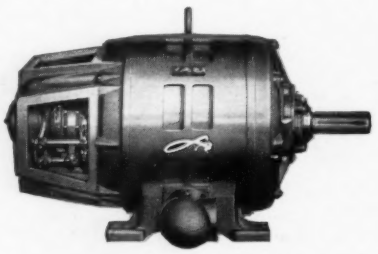
This PROTECTED D. C. motor has the same general construction features of the motor illustrated above. The specially designed protective end bell and armature coverings make this motor especially adaptable for use in coal mines, quarries, or where dropping particles may hit the motor.



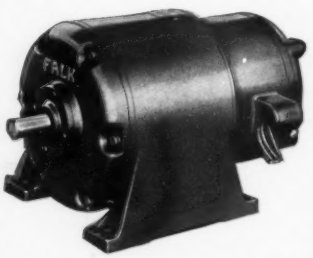
These Direct Current EXPLOSION-PROOF motors have been inspected and explosion-tested by the Bureau of Mines Laboratory. Also tested, listed and appoved by the Underwriters' Laboratories for all Class I, Group D explosive atmospheres.



A complete line of enclosed NON-VENTILATED motors is available in a wide range of mechanical and electrical characteristics. These motors are ruggedly constructed with solid cast iron housings to withstand severe treatment on difficult jobs.



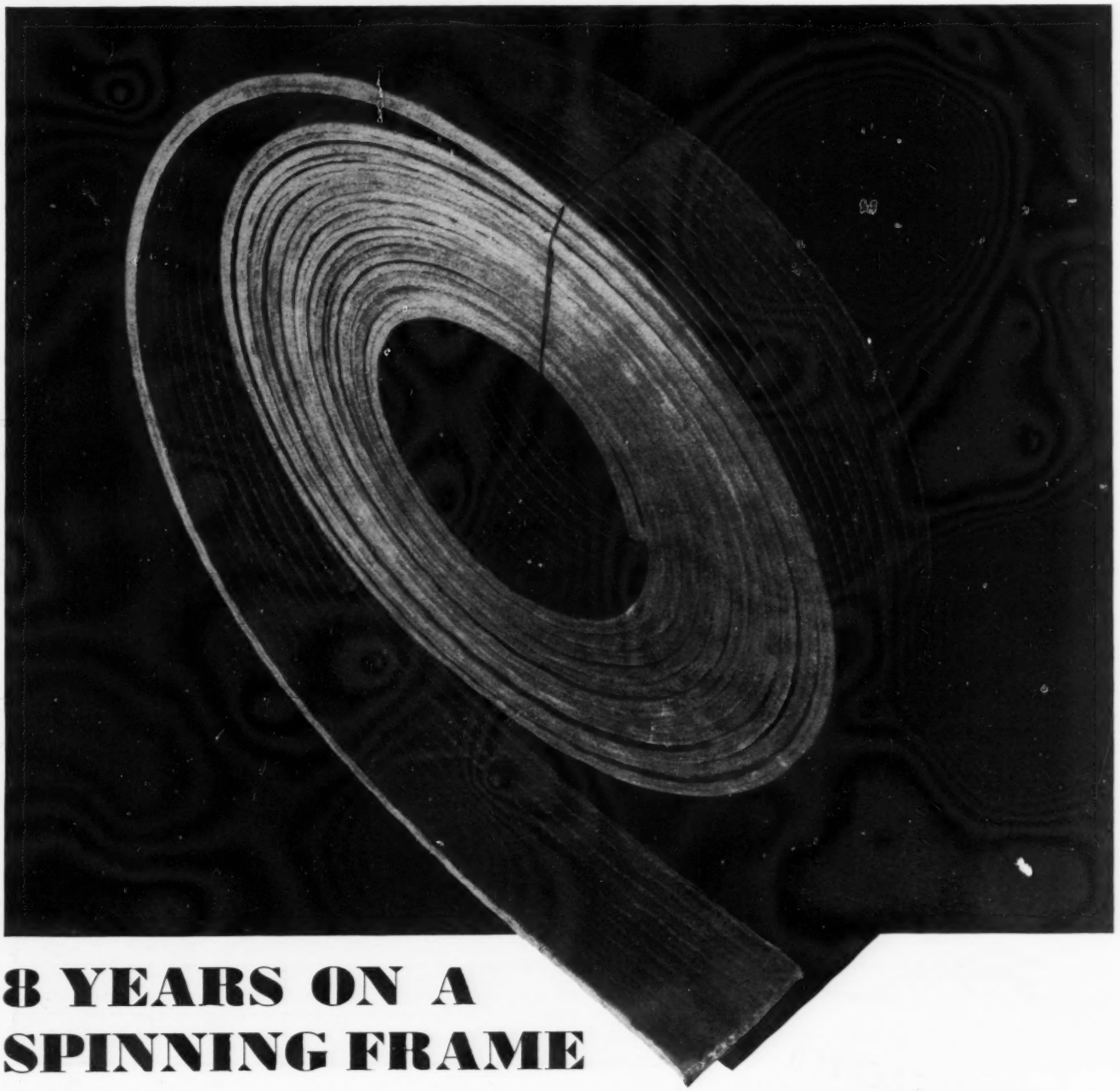
These WOUND ROTOR (slip ring) motors are ruggedly constructed throughout. A wide range of speed variations are obtainable with comparatively simple control. Available with mechanical modifications for every industrial use.



Louis Allis motors can be supplied with a very wide range of various types of gear reducers—integral—all-motor—gear-head—vertical—right angle or parallel—the proper drive for every industrial application.

No matter what your electric motor problem or requirement may be—we earnestly request your inquiry. Your needs will receive our most prompt and careful attention in every way.

THE LOUIS ALLIS CO., MILWAUKEE, WISCONSIN



8 YEARS ON A SPINNING FRAME

... and good for 8 more

The above treaded leather belt has been running 8 hours a day for 8 years on a 224-spindle spinning frame, driving the front roll at 135 R.P.M.

Despite the fact that it has turned the roll more than 150,000,000 times, this belt is still in excellent condition, and could well serve for another eight years.

That's service with a capital "S"—the kind of performance you can expect with a Houghton treaded belt.

The patented tread means better pulley grip, more power delivered, more turns per minute, hence greater production at lower belt cost. For the new belt book, write E. F. HOUGHTON & CO., Philadelphia or Charlotte.

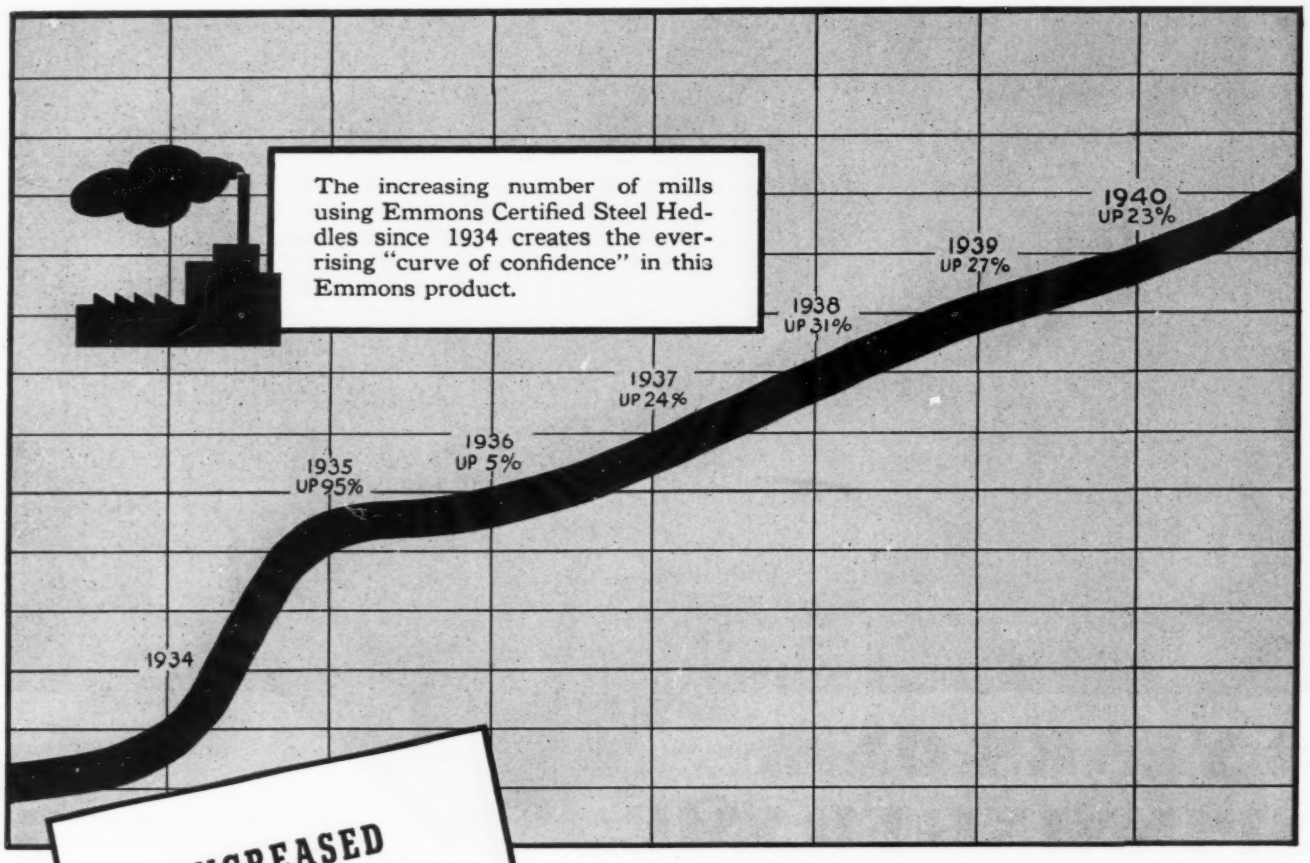
HOUGHTON'S LEATHERS FOR THE TEXTILE INDUSTRY

FOLLOW THE EMMONS

CURVE OF CONFIDENCE

Note the ever increasing number of mills buying Emmons Certified Steel Heddles! Consider the reason: consistently good performance, based upon rigid *quality control* in manufacture.

From choice of metal to the extra operations which streamline the heddle eye, Emmons inspectors watch every step, giving a final examination before attaching the "Inspected and Approved" seal. Then a famous outside Testing Laboratory buys samples in the open market and tests them for durability, corrosion-resistance, and smoothness of eye. Here's a basis for buying that you, too, can rely on!


The increasing number of mills using Emmons Certified Steel Heddles since 1934 creates the ever-rising "curve of confidence" in this Emmons product.
1934
1935 UP 95%
1936 UP 5%
1937 UP 24%
1938 UP 31%
1939 UP 27%
1940 UP 23%

INCREASED DISTRIBUTION

Service by Practical Millmen in Your State

Clifton Watson: Mgr. Southern Sales, Box 2036, Charlotte, N. C., Tel. Charlotte 3-7503.

Arthur Harris: Box 1982, Atlanta, Ga., Tel. Main 2643.

Alvin Braley: Box 236, Itasca, Texas, Tel. 170.

W. S. Taylor: 171 Madison Ave., New York City, Tel. Lex. 2-6060.

Emmons products, including standard sizes of flat heddles, are stocked in Charlotte and Atlanta. Emmons Reeds are manufactured in Charlotte.

This Inspected and Approved Seal builds confidence for *all* Emmons products, including

"Multiple Air Space" Reeds
"Chafeless Cord" Cotton Harness
Heddle Frames.

Get the most from your loom harness equipment! This free booklet is filled with money-saving hints for your mill. Write for it today!

EMMONS

LOOM HARNESS COMPANY

LAWRENCE, MASS. . . . . CHARLOTTE, N. C.

SEE LATEST TEXTILE WORLD YEARBOOK FOR DETAILS ON ALL EMMONS PRODUCTS

"Ten dollar Summer Suits that will last five years"... yesterday it was a rash forecast. Today mills are weaving mixtures of Spun Rayon with other synthetic and natural fibers in interesting new patterns.

Remember, whatever the fiber or fabric you are dyeing, National Technical Service stands ready to help you with a color formula for an exact match at lowest cost under your own mill conditions.

WIRE, WRITE OR PHONE FOR FORMULAS AND COLOR STOCKS

NATIONAL ANILINE & CHEMICAL COMPANY, INC.

40 RECTOR STREET **NEW YORK, N. Y.**

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All wires seat square, flat and firmly into the Foundation.

All wires are parallel.

All wires are even in length.

All wires are spaced uniformly.

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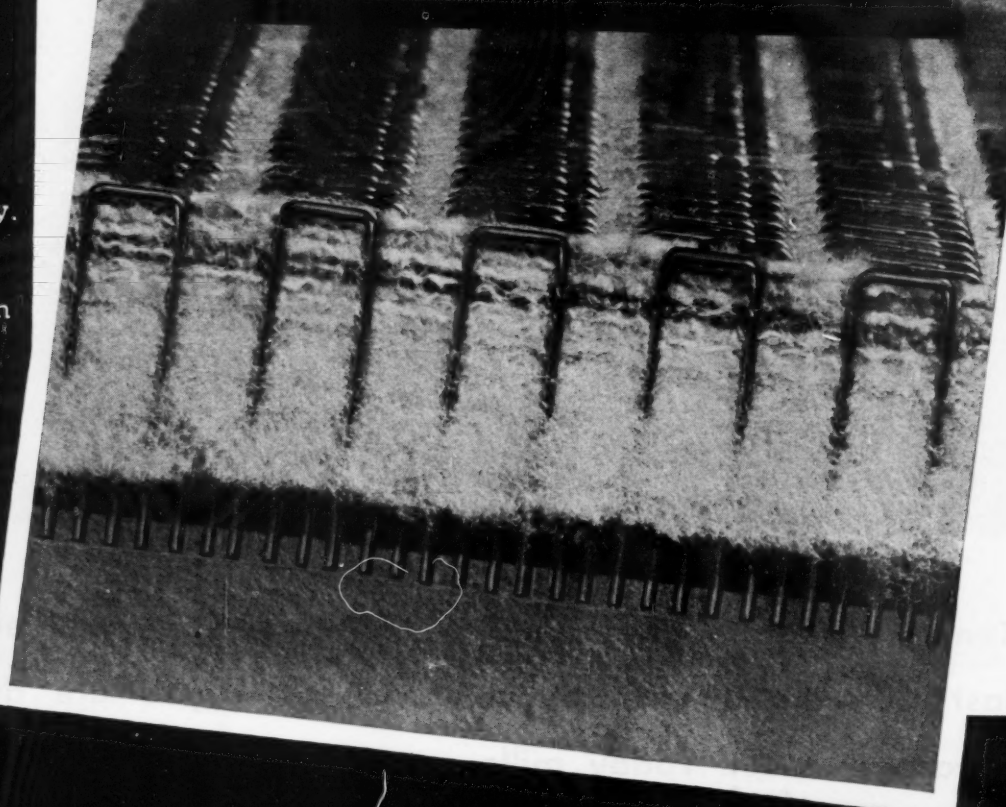
TUFFERIZED Card Clothing

(U. S. PATENT NO. 2,174,173)

An Exclusive Howard Bros. Patented-Precision-Process



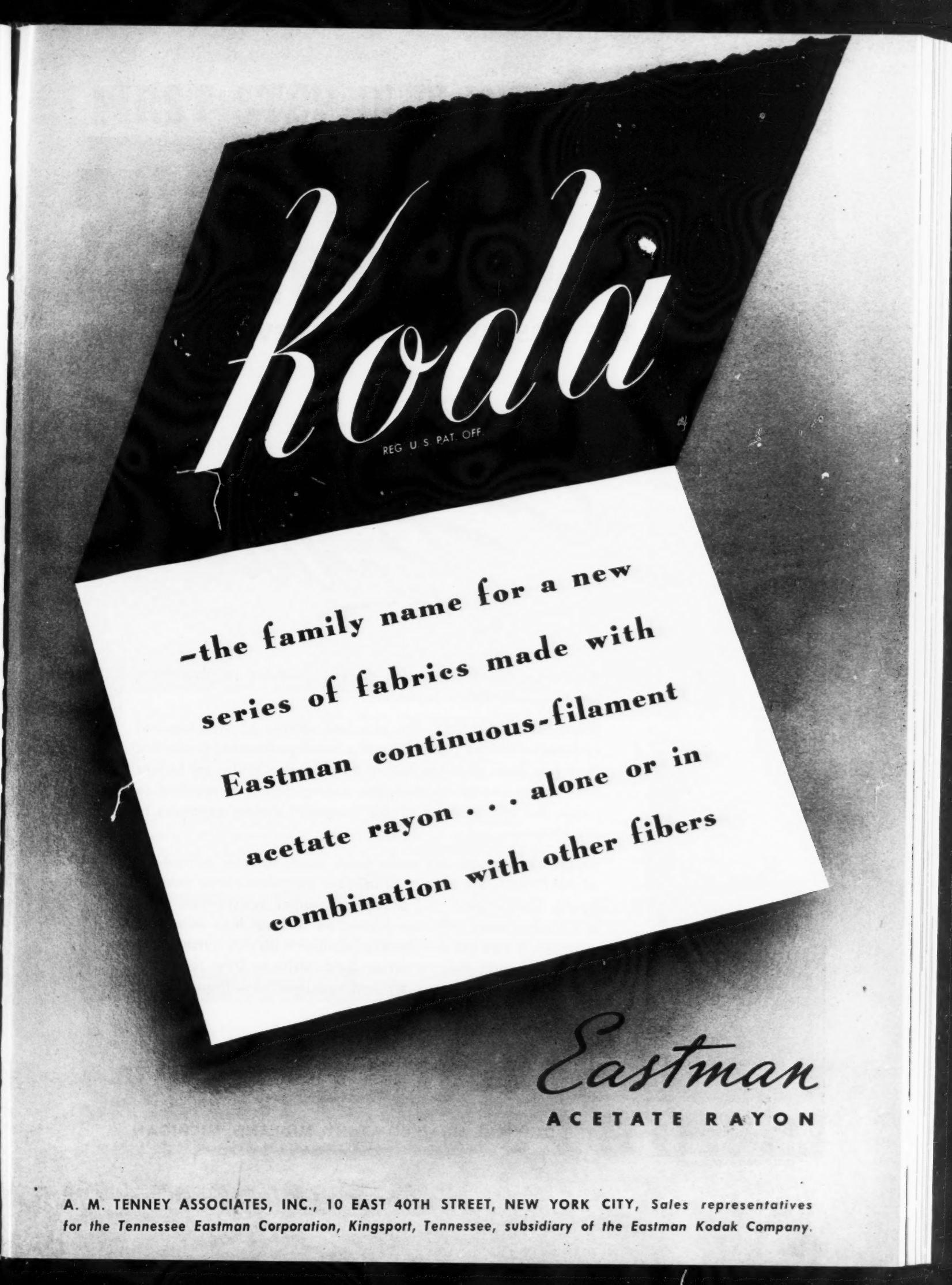
TRADE MARK
TUFFER
REG. U.S. PAT. OFF.
CARD CLOTHING

HOWARD BROS. MFG. CO.

HOME OFFICE AND FACTORY: WORCESTER, MASS.

Southern Plants: Atlanta, Ga., Gastonia, N. C. *Branch Offices:* Philadelphia, Dallas
Canadian Agents: Colwool Accessories, Ltd., Toronto 2, Canada

Products: Card Clothing for Woolen, Worsted, Cotton, Asbestos, and Silk Cards—Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Recovered and extra sets loaned at all plants—Lickerins and Garnett Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant—Midgley Patented Hand Stripping Cards, Howard's Special Hand Stripping Cards and Inserted-Eye and Regular Wire Heddles.

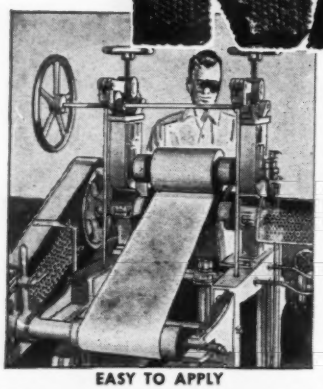

Koda
REG. U. S. PAT. OFF.
–the family name for a new series of fabrics made with Eastman continuous-filament acetate rayon . . . alone or in combination with other fibers
Eastman
ACETATE RAYON

A. M. TENNEY ASSOCIATES, INC., 10 EAST 40TH STREET, NEW YORK CITY, *Sales representatives for the Tennessee Eastman Corporation, Kingsport, Tennessee, subsidiary of the Eastman Kodak Company.*

PROGRESSIVE PROCESSORS

NAPENIZE

THE POSITIVE ANTI-MILDEW TREATMENT



EASY TO APPLY

NO LOSS OF TENSILE STRENGTH

INEXPENSIVE TO BUY

CUSTOMER SATISFACTION

Canvas Products

Processors NAPENIZE their canvas products to give them positive anti-mildew protection.

When they NAPENIZE, the physical affinity of the chemical compound for the cloth assures a more permanent protection than has been possible before and, consequently, far longer life for the treated product. No waterproofing is required to retain the effectiveness of the treatment during exposure to the elements.

Progressive processors have been quick to take advantage of NAPENIZE, the new anti-mildew treatment. It is easy to apply, low in cost and assures customer satisfaction since it provides more effective protection without loss of tensile strength. If you are not already familiar with this outstanding development in the processing field, write to Dow today for more complete information and specifications. Inquiries are welcomed.

DOW

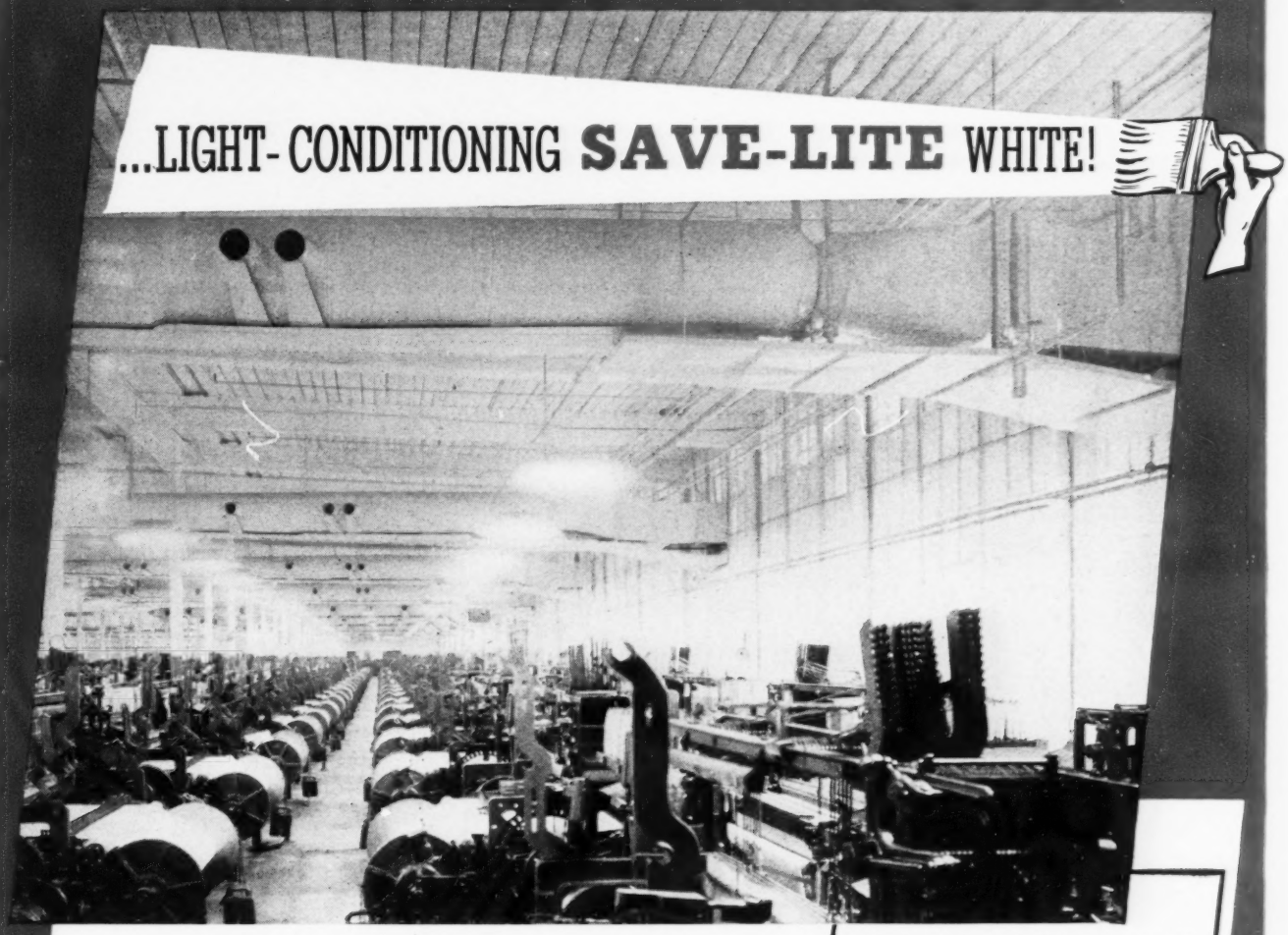
Working with you for America

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York, St. Louis, Chicago, San Francisco, Los Angeles, Seattle, Houston

FIRST STEP IN PLANT MODERNIZATION

...LIGHT-CONDITIONING **SAVE-LITE** WHITE!



● *When you modernize your plant—think first of white paint—Sherwin-Williams Save-Lite White. It's the most effective and economical way to more light and lasting cleanliness in any plant!*

Consider the picture above, showing the weave room of the Stonecutter Mill, Spindale, N. C. Here you see plant modernization at its best. Modern air conditioning keeps heat and humidity always at desired levels. Modern fluorescent lighting gives daylight-type illumination of high intensity. And Sherwin-Williams Save-Lite, the modern light-conditioning white paint, further increases levels of light, reflects it uniformly, helps keep ceilings and walls spotlessly clean. Even the windows are painted over with Save-Lite—for maximum light reflection on a 24-hour basis!

Stonecutter is but one of the many recently modernized plants in which Sherwin-Williams Save-Lite plays its important part. If you plan to modernize your plant, by all means get in touch with your nearest Sherwin-Williams Representative. Or send the coupon.

QUICK SAVE-LITE WHITE FACTS

1. *It's a whiter mill white...stays white longer.*
2. *It reflects more light . . . diffuses it scientifically.*
3. *It costs less to apply...goes on easier, spreads further, covers better.*
4. *It costs less to use...stands up longer under strenuous plant conditions.*
5. *It's made in various types for specific purposes.*
6. *It is designed specifically for industrial use by highly trained technicians. Plant surveys and recommendations made without obligation.*

FREE! SEND THIS COUPON!

THE SHERWIN-WILLIAMS COMPANY
107-C Prospect Avenue N. W., Cleveland, Ohio

Please send me, FREE, without obligation on my part your new, 30-page, illustrated file folder—"Facts About White Paint and Better Illumination."

Name _____

Address _____

City _____

State _____

SHERWIN-WILLIAMS

SAVE-LITE WHITE

THE LIGHT-CONDITIONING PAINT

JMS COVER THE EARTH

AN IDEA FROM AN OLD SHOE...

HOW CROWN TENASCO HIGH-STRENGTH RAYON YARN HELPS SHOES HOLD THEIR SHAPE LONGER*

You might not expect to find an idea in an old shoe. But that's exactly where the idea originated for Rosenstein's new extra-strong elastic shoe lining. Here's how it happened...

One of the fabric experts of this company questioned his wife about a pair of shoes which she had tossed in the trash basket. "They're not worn out," she admitted, "but they're so badly out of shape I can't wear them any more." That set him to thinking. He found that many women's shoes were discarded for the same reason. "If I could only develop a strong, elastic fabric for shoe linings," he thought, "the problem would be solved."

Many types of fabric were tried out, with mixed success. Then along came Crown Tenasco, the new high-strength rayon yarn. It was just what he needed. It had the extra strength to withstand the "sawing" action that goes on within a shoe-lining fabric as the shoe is worn. It wore longer and resisted the effects of moisture. Its added durability held shoes in shape longer.

Today this fabric, "Rosine," with Crown Tenasco warp and elastic fill, is an established favorite with many leading shoe manufacturers. Yardages have exceeded all expectations. All because a man found an idea in an old shoe and then put that idea to work with Crown Tenasco.

Perhaps *you* have a fabric idea tucked away somewhere, unused, for want of a stronger rayon yarn. Or perhaps extra strength may be just what you need to improve one of your present fabrics, to lift it out of the competitive class. Whichever is the case, it will pay you to get the facts on high-strength Crown Tenasco. Write today for complete information.

AMERICAN VISCOSE CORPORATION

350 Fifth Ave., New York, N. Y.

WORLD'S LARGEST PRODUCER OF RAYON YARN

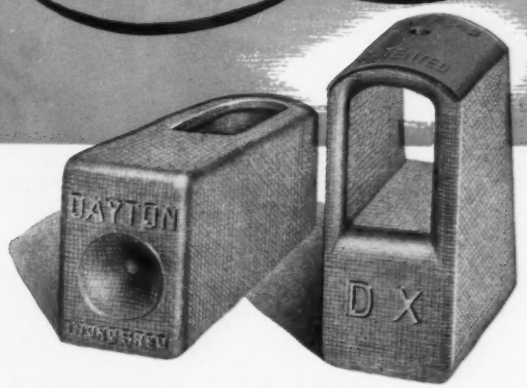
CROWN TESTED AND APPROVED RAYON FABRIC

Sales Offices: New York, N. Y.; Charlotte, N. C.; Providence, R. I.; Philadelphia, Pa.

Plants at: Marcus Hook, Pa.; Roanoke, Va.; Lewistown, Pa.; Parkersburg, W. Va.; Nitro, W. Va.; Meadville, Pa.; Front Royal, Va.

*Reg. U. S. Pat. Off.

Copr. 1941—American Viscose Corp.



THE THOROBRED LOOP PICKER
New flared bottom... rounded corners on front of picker... molded by new method to eliminate roughness. Keeps its shape and "stays put" on the stick. Has proper cushion. Easy to install. Proved long life and greater economy
THE THOROBRED LUG STRAPS
Freedom from adjustment and constant power maintenance assures increased production at lower costs. Thorobred Lug Straps have extra strength ... proper cushion ... desired resilience ... and the ability to absorb shock. Never require adjustment and have long, trouble-free life.

Proved in actual Mill Service, the long-lasting Dayton De Luxe Picker saves up to 50% in picker costs! The special fabrics in this picker are two times stronger ... the resilient rubber that bonds the fabrics together is much tougher and stronger. In fact, Daytons are the only pickers that stand the gaff on the new XP's, XL's and XD's.

And that's not all. All Dayton De Luxe Pickers are exactly alike—absolutely uniform. You can box the loom the same at all times. And once the loom is in parallel, it stays that way. Throwing a crooked shuttle is eliminated, and realigning time is saved.

Because of a new method of molding, this De Luxe Picker is so smooth that jerked-in fillings are reduced to a minimum.

Write today for all the details—or ask your nearest distributor about the De Luxe Thorobred Loop Picker.

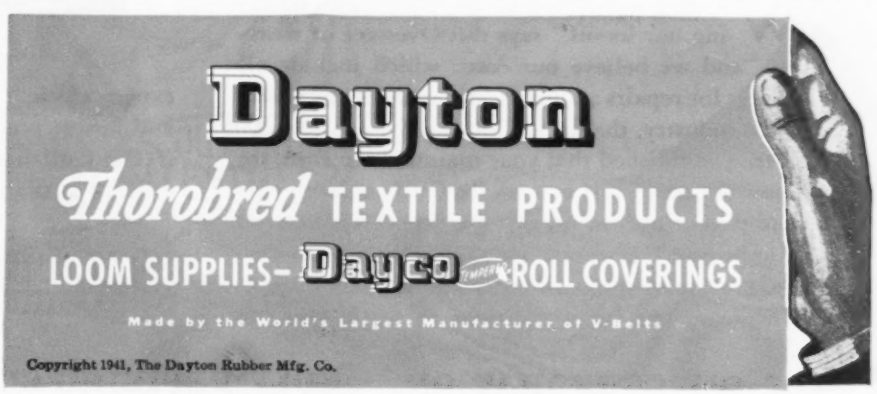
THE DAYTON RUBBER MFG. CO.
Dayton, Ohio and Waynesville, N. C.
Dayton Loom Supplies are protected by U. S. Patents issued or pending.

DISTRIBUTED BY

GREENVILLE BELTING CO.	Greenville, S. C.
GREENVILLE TEXTILE SUPPLY CO.	Greenville, S. C.
ODELL MILL SUPPLY CO.	Greensboro, N. C.
THE TEXTILE MILL SUPPLY CO.	Charlotte, N. C.
INDUSTRIAL SUPPLIES, Inc.	LaGrange, Ga.
YOUNG & VANN	Birmingham, Ala.
TEXTILE SUPPLY CO.	Dallas, Texas
AMERICAN SUPPLY CO.	Providence, R. I.
PROVIDENCE MILL SUPPLY CO.	Providence, R. I.
F. L. HERVEY CO.	Fall River, Mass.

CANADIAN REPRESENTATIVES

ROSS WHITEHEAD & CO., Ltd.	Montreal, Quebec


Dayton
Thorobred TEXTILE PRODUCTS
LOOM SUPPLIES- Dayco ROLL COVERINGS
Made by the World's Largest Manufacturer of V-Belts
Copyright 1941, The Dayton Rubber Mfg. Co.

"We have *exceptionally low* loom maintenance costs, thanks to GULF LUBRICANTS"

. . . says this Overseer

(Above) This Overseer of weaving attributes his low loom maintenance costs to good lubrication with Gulf quality lubricants.

(Right) The Overseer of weaving discusses loom lubrication with his second hand.

..."We believe our maintenance costs per loom are as low as any in the industry"

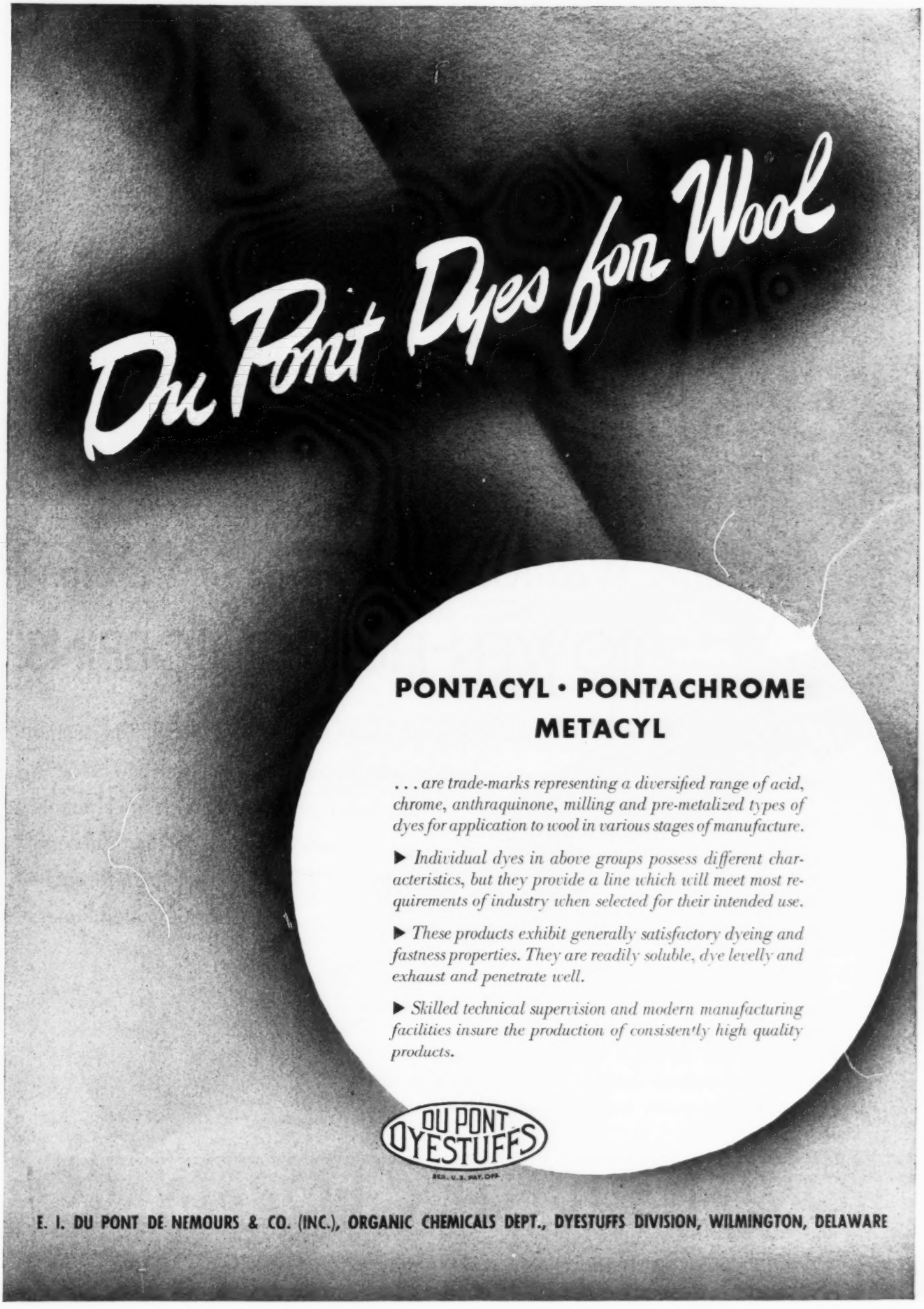
"WE keep accurate maintenance records covering our looms," says this Overseer of weaving, "and we believe our costs, which include all charges for repairs and lubrication, are as low as any in the industry, thanks to Gulf quality lubricants."

Are you satisfied that your maintenance costs are as low as possible? If not, ask the Gulf engineer who calls at your mill to suggest the proper application of improved lubricants, which have been manufactured to meet present-day peak-load conditions. When you put his suggestions to work, you can expect efficient performance from your machines and lowest possible maintenance costs.

The Gulf line of 400 quality oils and greases is quickly available to you through more than 1200 warehouses in 30 states from Maine to New Mexico. Write or 'phone your nearest Gulf office today.

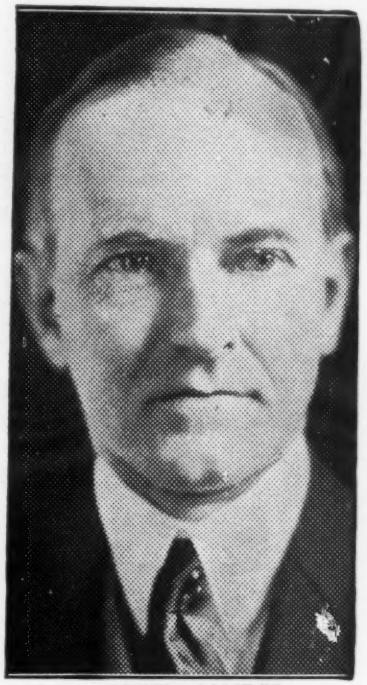
GULF INDUSTRIAL LUBRICATION

GULF OIL CORPORATION · GULF REFINING COMPANY · Pittsburgh, Pa.


Du Pont Dyes for Wool
PONTACYL • PONTACHROME
METACYL
. . . are trade-marks representing a diversified range of acid, chrome, anthraquinone, milling and pre-metalized types of dyes for application to wool in various stages of manufacture.
▶ Individual dyes in above groups possess different characteristics, but they provide a line which will meet most requirements of industry when selected for their intended use.
▶ These products exhibit generally satisfactory dyeing and fastness properties. They are readily soluble, dye levelly and exhaust and penetrate well.
▶ Skilled technical supervision and modern manufacturing facilities insure the production of consistently high quality products.
DU PONT DYESTUFFS
REG. U.S. PAT. OFF.
E. I. DU PONT DE NEMOURS & CO. (INC.), ORGANIC CHEMICALS DEPT., DYESTUFFS DIVISION, WILMINGTON, DELAWARE

"Above all things, be brief"

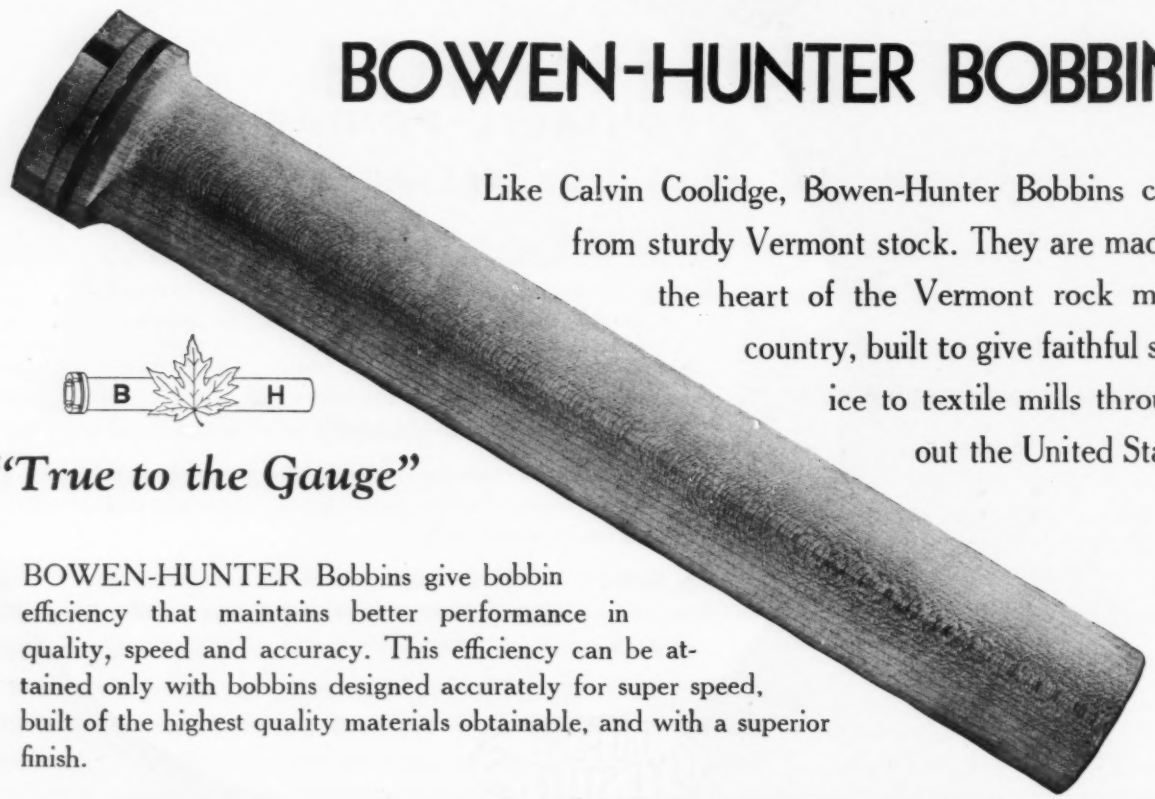
These words spoken in one of his always short speeches, express better than any other one thing, the philosophy and the character of Calvin Coolidge, thirtieth President of the United States. They show his simple, straightforward manner; they give some insight of his heritage. Calvin Coolidge was born on a farm near Plymouth, Vermont, July 4, 1872, of sturdy Vermont stock. Elected Vice-President in 1921, he took the office of President on Harding's death in 1923.



CALVIN COOLIDGE

Another Well-Known Product of Vermont

BOWEN-HUNTER BOBBINS



Like Calvin Coolidge, Bowen-Hunter Bobbins come from sturdy Vermont stock. They are made in the heart of the Vermont rock maple country, built to give faithful service to textile mills throughout the United States.

B H

"True to the Gauge"

BOWEN-HUNTER Bobbins give bobbin efficiency that maintains better performance in quality, speed and accuracy. This efficiency can be attained only with bobbins designed accurately for super speed, built of the highest quality materials obtainable, and with a superior finish.

BOWEN-HUNTER BOBBIN CO.

East Corinth, Vermont

SOUTHERN REPRESENTATIVES: THE McLEOD COMPANIES, GREENSBORO, N. C., GREENVILLE, S. C.

use STANDARD

Textile Silicates

FOR

UNIFORMITY • SUITABILITY • PURITY

IN GRADES TO SUIT YOUR NEEDS

√ KIER BOILING
√ SCOURING YARNS
√ SOAPING PRINTS
√ SILK WEIGHTING
√ SCOURING RAYONS
√ WATER TREATMENT
√ PEROXIDE BLEACHING

Standard Silicates combine the very qualities you seek—highest soil suspending power, with controlled alkalinity over a wide range. Furthermore, Standard maintains a complete Laboratory and Technical Service to help you develop the best procedure for your particular needs. Make use of this valuable service—it is offered absolutely free!

ALKALI

DIAMOND ALKALI COMPANY • Standard Silicate Division

Plants at CINCINNATI · JERSEY CITY
LOCKPORT, N. Y. · MARSEILLES, ILL.
DALLAS, TEXAS

General Offices • PITTSBURGH, PA.

COTTON *invites you -*

To Share the Benefits of This All-American Crusade

On the march, — the cotton industry, — carrying domestic cotton consumption to new all-time highs. 8,000,000 bales in 1940. Over 9,000,000 bales this year. With your support cotton consumption in the United States can go far higher still.

Rally under this emblem already appearing on the products of over 400 manufacturers and distributors of cotton products. Put this emblem on your own cotton products, on your labels or cases, in your trade literature, in your advertising.

Get your own share of the benefits from this token of Cotton's All-American Crusade. It is leading the untold millions of consumers who prefer All-American products to the goods that display this token. It is bringing a new prosperity to the 11,000,000 Americans who depend on raw cotton. And it will consolidate *your* old customers and lead new ones to *your* goods.

May we repeat our invitation to you to join our ranks? A partial list of firms using the Cotton emblem appears below.

Wamsutta Mills
New Bedford, Mass.
Avondale Mills
Sylacauga, Ala.
Pepperell Manufacturing Company
Boston, Mass.
Bibb Manufacturing Co.
Macon, Ga.
Everfast Fabrics, Inc.
New York City
W. E. McKay & Company
New York City
Riverside & Dan River Cotton Mills
Danville, Va.
Sears, Roebuck and Co.
Chicago, Ill.
Georgia-Kincaid Mills
Griffin, Ga.
Freund, Freund & Co.
New York City
Cone Export & Commission Co.
Greensboro, North Carolina

Wilson Brothers
Chicago, Illinois
Worcester Knitting Company
New York City
Callaway Mills
LaGrange, Ga.
Chicopee Sales Corporation
New York City
Aberfoyle Manufacturing Co., Inc.
Chester, Penn.
Taylor Bedding Manufacturing Co.
Taylor, Texas
Barnhardt Manufacturing Co.
Charlotte, North Carolina
Fulton Bag & Cotton Mills
Dallas, Texas
Wilson Textiles
New York City

Brewster Shirt Corporation
New Haven, Conn.
Carlton Yarn Mills, Inc.
Cherryville, N. C.
Electric Hose and Rubber Co.
Wilmington, Delaware
Bemis Bros. Bag Company
St. Louis, Missouri
Textile Bag Mfrs. Assoc.
Chicago, Ill.
Institute of Distribution
New York City
Werthan Bag Corporation
Nashville, Tenn.
N. Fluegelman & Co., Inc.
New York City
Revere Sugar Refinery
Boston, Mass.

A. O. Dailey & Sons, Inc.
Binghamton, N. Y.
McCallum & Robinson, Inc.
Memphis, Tenn.
Polly Prentiss, Inc.
Sumter, S. C.
Delta Bag Company
Vicksburg, Miss.
Milco Undergarment Co.
Bloomsburg, Penn.
Lane Cotton Mills Co.
New Orleans, La.
Ware Cotton Batting Co.
New Orleans, La.
H. Wenzel Tent & Duck Co.
St. Louis, Missouri
Geo. B. Carpenter & Co.
Chicago, Ill.
Kellogg Company
Battle Creek, Mich.
G. E. Conkey Company
Cleveland, Ohio

We should like to add your name to the roster of patriotic firms which are mobilized behind the Emblem of Cotton. How about it? Write for electrotypes, mats, or engraver's proofs of this emblem.

NATIONAL COTTON COUNCIL *of* AMERICA
69 Union Street, Memphis, Tenn.

COTTON TEXTILE INSTITUTE
320 Broadway, New York, N. Y.

Nature's
STARCH LABORATORY

Wherever corn grows, Nature's magic transforms sunlight, water and carbon dioxide into starch. Man emulates the Master Chemist by processing starchy kernels into products to serve many industries. ★ STEIN-HALL chemists have developed highest quality, maximum economy textile starches . . Potato and Wheat as well as Corn Starches . . backed by technical men who are ready to help you solve your sizing, printing and finishing problems. ★ For three-quarters of a century, STEIN-HALL Starch Service has expressed a sincere and constant effort to create and maintain a relationship of mutual benefit and confidence with all customers. ★ That sound policy has weathered two wars since 1866. *You can depend upon it now!*

SH

STEIN, HALL & COMPANY, Inc.

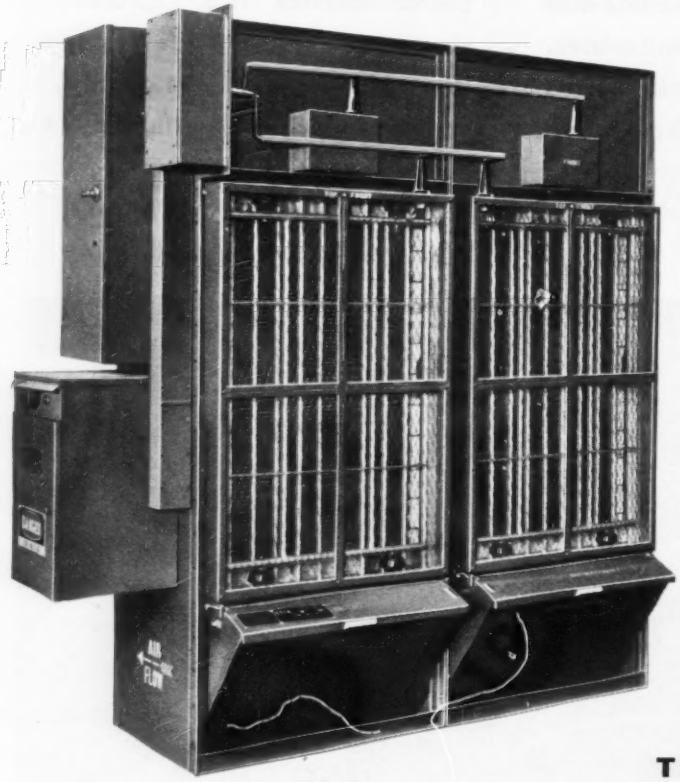
285 Madison Avenue • New York
1011 Johnston Bldg. • Charlotte, N. C.
LABORATORIES AT . . NEW YORK • CHICAGO • CHARLOTTE • PROVIDENCE • LONG ISLAND CITY, N. Y.

1866 1941 75th Anniversary STEIN-HALL

★ ★ A TEXTILE STARCH FOR EVERY TEXTILE PURPOSE ★ ★

Outstanding for Textile Mill Service

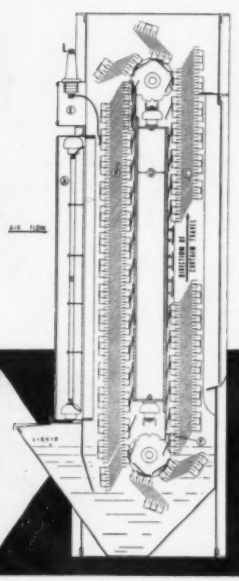
because of its high efficiency and automatic self-cleaning features



By combining electrical precipitation as an integral part of an automatic filter, the Electro-Matic provides the highest cleaning efficiency when compared with any other air cleaner on the market today. The Electro-Matic has been tested and proved in many of the country's leading textile mills where thousands of dollars have been saved by reducing soilage and loss caused by dust, soot and smoke particles. Write for Bulletin 250C which describes in detail the operation of the Electro-Matic.

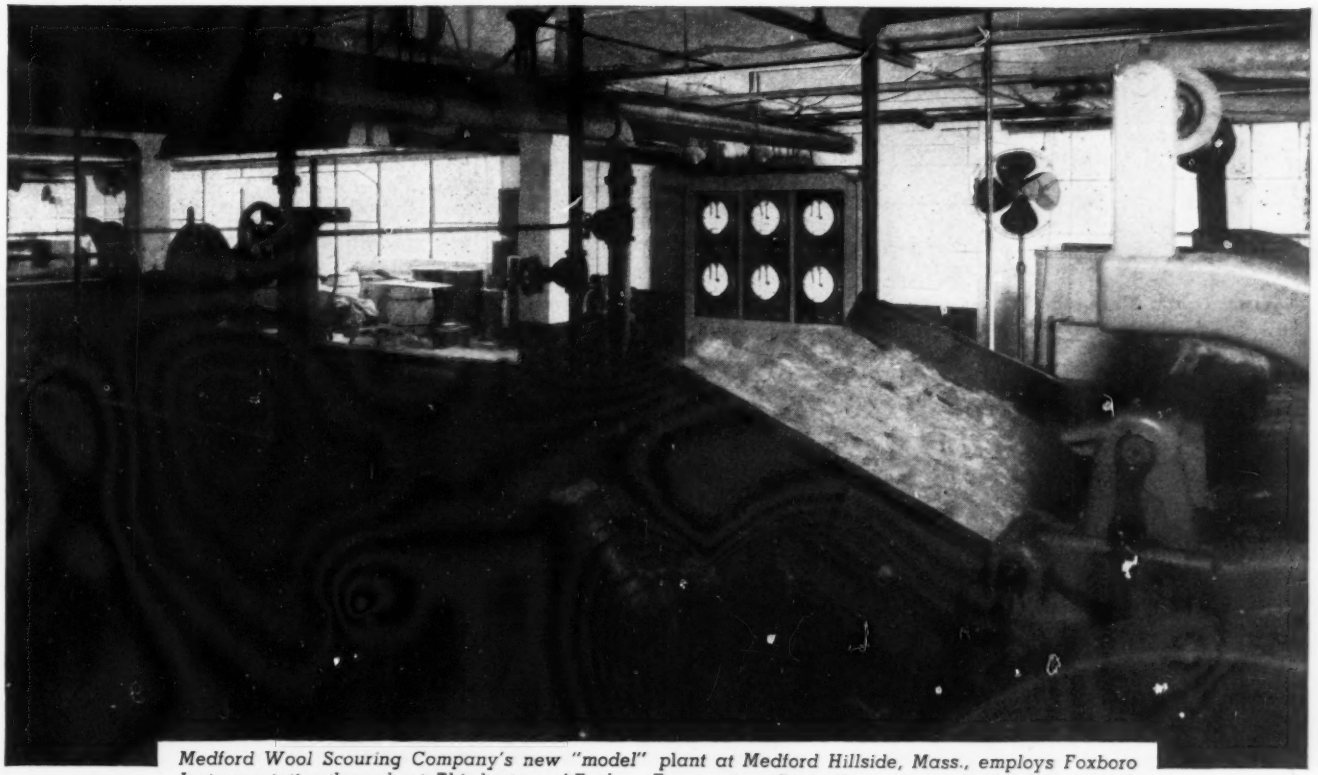
THE ELECTRO-MATIC COLLECTS SMOKE, SOOT AND DUST ELECTRICALLY AND CLEANS ITSELF AS IT CLEANS THE AIR.

The exclusive self-cleaning feature incorporated in the Electro-Matic air filter makes shutdowns and interruptions for cleaning unnecessary. Shown at the right is a cross section of the Electro-Matic filter showing how the continuous filter curtain is washed free of collected dust, soot and smoke particles automatically.


Filter curtain passes thru Visconsine bath releasing impinged dust and smoke particles which settle to bottom of reservoir.

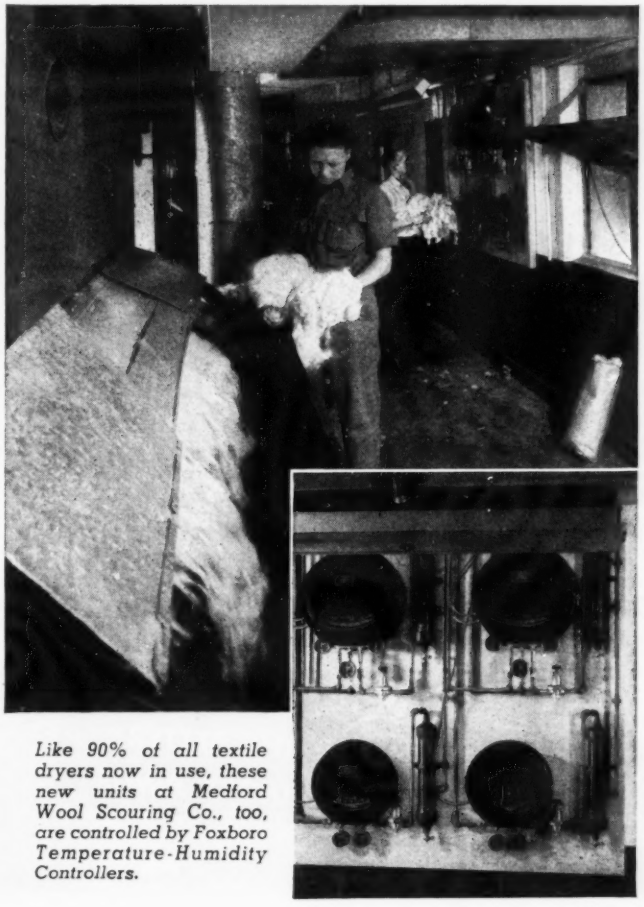
AMERICAN AIR FILTER COMPANY, Inc.
Incorporated
269 Central Ave., Louisville, Ky.

ELECTRO-MATIC
Self Cleaning
ELECTROSTATIC AIR FILTER



Medford Wool Scouring Company's new "model" plant at Medford Hillside, Mass., employs Foxboro Instrumentation throughout. This battery of Foxboro Temperature Controllers on scouring bowls is typical.

It Doesn't Come In Packages!



Like 90% of all textile dryers now in use, these new units at Medford Wool Scouring Co., too, are controlled by Foxboro Temperature-Humidity Controllers.

There's more to *correct instrumentation* of textile processes than just an instrument in a package! It takes "knowing how", as well . . . intimate knowledge of mill problems plus long experience in *applying* instruments to solve them.

Foxboro Instrumentation for textile mills is engineered by men who know cotton, rayon and woolen processing from the bottom up. More than 15 years ago, they recognized long-standing problems in textile drying, and solved them by originating the faster, safer practice of controlling *both* humidity and temperature in dryers.

Similarly, their first-hand experience showed the need for closer, more economical temperature control in batch-processing. As a result, these men developed Foxboro On-Off Controllers . . . the simplest, most positive of their type.

These are merely typical examples of Foxboro Creative Engineering. Write for details of the process instrumentation you require. **The Foxboro Co., 18 Neponset Avenue, Foxboro, Mass., U. S. A.** Branches in principal cities of U. S. and Canada.

FOXBORO

Reg. U. S. Pat. Off.

Creative Instrumentation

NORMAL PRODUCTION SPEED FROM THE MOMENT THEY ARE INSTALLED . . .

Pawtucket Vitritex Rings do not have to go through an expensive, traveler-wearing, breaking-in period when they're new. From the moment they are installed your frames operate at their normal speed and efficiency.

Pawtucket Rings are known for their precision workmanship, durable glass-smooth finish, easy starting qualities. Travelers last longer and run smoother and better on these rings . . . a fact which many spinning-room overseers have found from experience.

We will be glad to arrange a trial installation . . . or furnish without cost or obligation sufficient samples for your own test purposes.

PAWTUCKET SPINNING RING COMPANY
(Subsidiary of Saco-Lowell Shops)
CENTRAL FALLS, RHODE ISLAND

GIVE YOUR TRAVELERS A "TURN FOR THE BETTER" . . . . INSTALL PAWTUCKET VITRITEX RINGS

SPECIAL MANUFACTURING METHODS MAKE RESEARCH IDEAL FOR PIVOTED BASE DRIVES

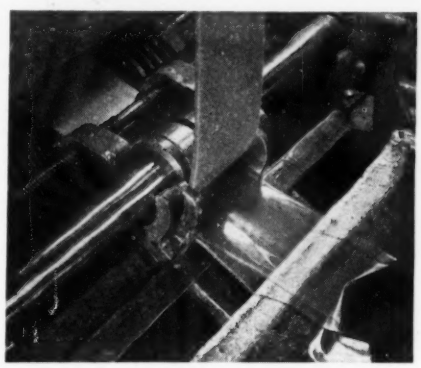
The increasing use of Research Leather Belting, as the partner of the pivoted motor base, is the result of manufacturing control which, it so happens, was in effect even before the widespread adoption of the pivoted base.

In the first place, Research Belting is Graton & Knight-made from start to finish. From a large stock of hides, certain ones are selected for the "Research" type of tanning. The belting is made from center stock only, and specialized processes produce a belt with exceptionally low elastic and permanent stretch, which is so important on pivoted base drives. With the Rockwood or Browning base, adjustments are fewer; with the American base, the motor is not permitted to swing to the limit of the arc.

3% MORE PRODUCTION GUARANTEED

The superior pulley grip of Research counteracts the effect of the smaller arc of contact between belt and small pulley. Slip is reduced to such an extent that at least 3% more average machine production is guaranteed.

Research carries full rated loads at lower belt tension. This means less wear on bearings, less wasted power, longer belt life. The useful life of Research is also increased by its natural pliability which allows it to stand up better under constant flexing.



Patented Tension-Cementing

A PATENTED PROCESS LENGTHENS BELT LIFE

"Tension-cementing" provides another important advantage. Research Belting is cemented while under tension comparable with normal working conditions. The tension-cemented plies withstand running over small pulleys.

FREE BOOKLET

Plant operating men and purchasing men will find useful information in the free booklet, "The Right Combination." Address Dept. L., Graton & Knight, Worcester, Massachusetts.

"HERE'S THE L-O-N-G AND SHORT OF THE BELTING QUESTION"

Where you want increased machine production — select **RESEARCH LEATHER BELTING**

for Modern Group Drive
for Pivoted Motor Base

Research is a *production* belt. For drives running day in and day out — where every extra unit of production is important — Research will give you maximum power transmission. It has 50-75% less stretch. Research is *guaranteed* to increase your average machine production at least 3%.

Use Research also for pivoted motor base drives, where small pulleys and constant flexing require an extra-pliable belt with a tight-gripping surface. Research will give you added machine output . . . longest belt life . . . dependable, maintenance-free service.

A more expensive belt can't give you more . . .
No other belt can give you as much.

WRITE FOR new free bulletin, "The Right Combination for Short-Center Drives."

Graton & Knight Belting turns more pulleys than any other make in the world!

GRATON & KNIGHT CO.

Tanneries and Manufacturing Plant at
WORCESTER, MASSACHUSETTS

GRATON AND KNIGHT

We are the only leather belting manufacturer with complete nationwide service facilities. See page in THOMAS' REGISTER.

Complete line of flat leather belting . . . round belting . . . cements, dressings . . . lace leather . . . Spartan Packings . . . textile leathers.

LIBERTY—TO DO WHAT?

THREE soldiers on a street corner, wondering where to go from here.

Where next—in a town whose sidewalks are overflowing with men on leave from camp? A dance somewhere? No such luck, soldier. The movies? Take a look at that line down the block. Somewhere to meet a friend, to write a letter . . .

"Dad used to tell me about places back in '17 . . ."

"We were at war then, Buddy. People cared."

• • •

Isn't it time America woke up to the fact that building an army is more than camps and guns? An army is men. And one of the most urgent problems in any all-out scheme of national defense is how to provide for these men off duty.

Within the camps and naval stations the services themselves have excellent facilities. But in the surrounding cities and towns, the problem is urgent and serious.

Many of the newer army camps are located far from the larger centers. Into towns of 1,000 to 5,000 population may come as many as 3,000 men on a single evening. Not half of them can find places to eat; hardly any can find opportunities for wholesome entertainment.

To meet this emergency all the "service agencies" of the last war have joined forces. The Y. M. C. A., the National Catholic Community Service, the Salvation Army, the Y. W. C. A., the Jewish Welfare Board and the National Travelers Aid Association have combined to form the United Service Organizations—known as the U. S. O. Differences of race and creed have been forgotten; lesser distinctions of purpose and method have been subordinated to the idea of united service.

How can you help? The U. S. O. is raising approximately eleven million dollars to finance its program of leisure-time aid to the men in service. Give generously to the U. S. O.

How will the money be used? In maintaining 360 U.S.O. clubs. The government is building the club houses themselves. What is required now is money to operate them.

How and where shall you give? To the local committee that has charge of your city's part in this national drive. No matter how much or how little you feel you can give, send it today to your local chairman or to National U. S. O. Headquarters, Empire State Building, New York.

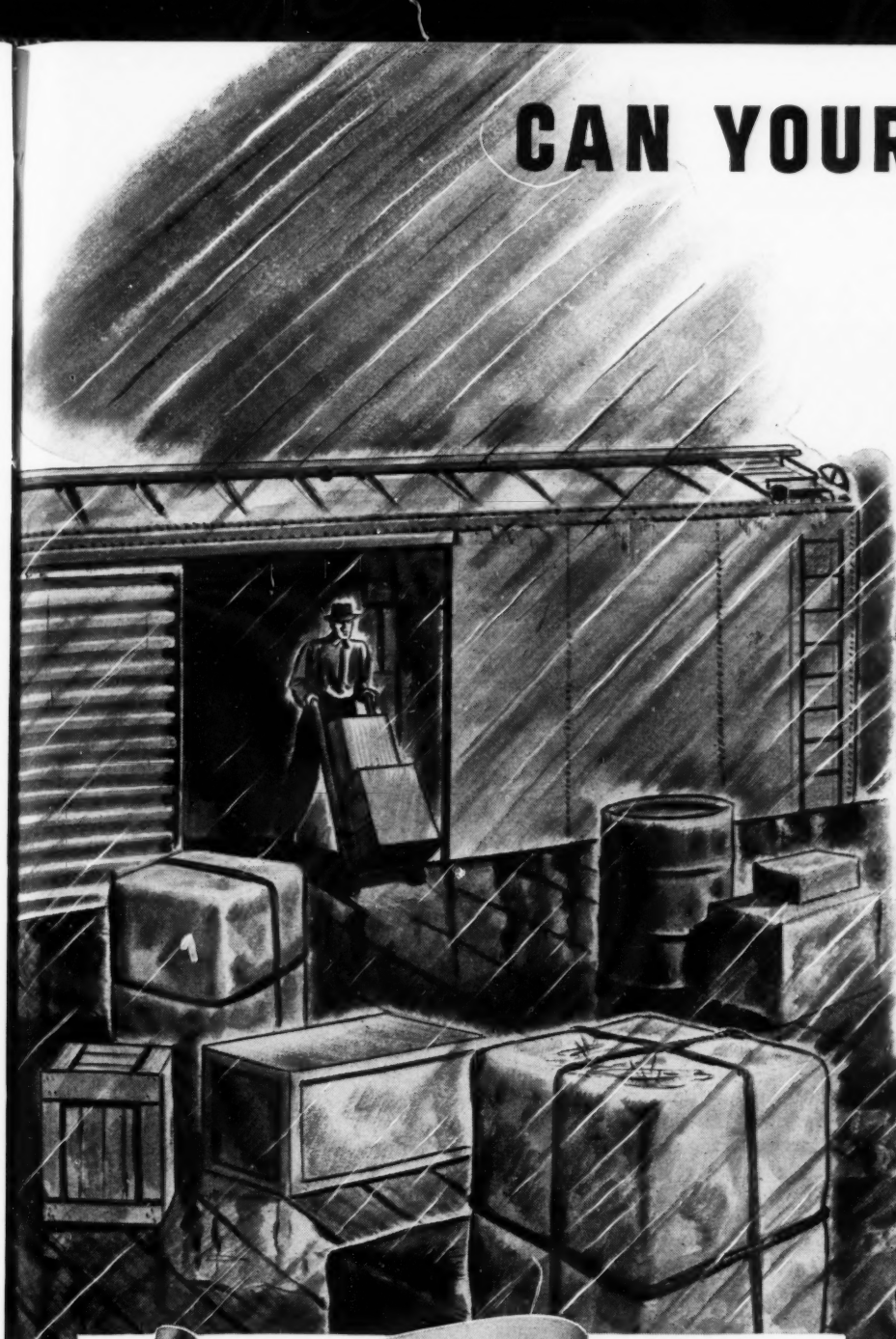
CAN YOUR SHIPMENTS *Take it?*

RAIN, sleet, dust, dirt and careless handling are hazards of transit beyond your control. Once the shipment leaves your plant, all you can do is hope. But you can control the packaging! Can the wrapping material and methods used by *your shipping department* "take it"?

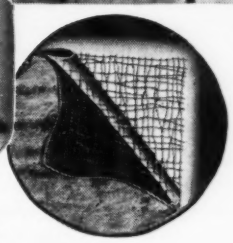
FIBREEN is doing an outstanding protective job for American industry.

Steel mills use it to wrap 10-ton bundles of steel sheets, loaded on open freight cars. Furniture makers find a FIBREEN wrap gives effective shipping protection at a substantial saving in labor and crating. It has reduced claims for damage in transit to a remarkable degree. It protects export shipping — wraps and protects a host of products varying from a box of roses to auto bodies.

Perhaps it can do a job for you. The Sisalkraft Co. has accumulated a wealth of experience and research in packaging and shipping. Write, outlining what you have to protect or ship and your present methods. We will suggest methods others have found effective; and supply, without obligation, enough FIBREEN for a practical trial.



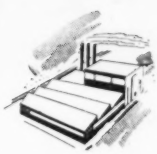
FIBREEN



FIBREEN is 6 ply: TWO layers of strong kraft, reenforced with TWO layers of crossed sisal fibers embedded in TWO layers of special asphalt — all combined under heat and pressure. FIBREEN is pliable and clean — will not scuff — stands an astonishing amount of abuse and exposure. FIBREEN is used either as a wrapping or a lining material.

Soak it—twist it—try to tear it! Only when you get a sample in your own hands can you realize that a *paper* can be so strong — so tough —and impervious to moisture. There is no other material like FIBREEN. Available promptly in rolls and blankets of many widths. Write for sample.

FIBREEN is a product of The Sisalkraft Co. — also manufacturers of Sisalkraft, Sisal-X, Sisal-Tape and Copper-Armored Sisalkraft.



THE SISALKRAFT CO.
205 W. WACKER DRIVE · CHICAGO, ILL.
NEW YORK · SAN FRANCISCO · LONDON · SYDNEY

SERVING INDUSTRY . . . . . CONSTRUCTION AND AGRICULTURE THROUGHOUT THE WORLD

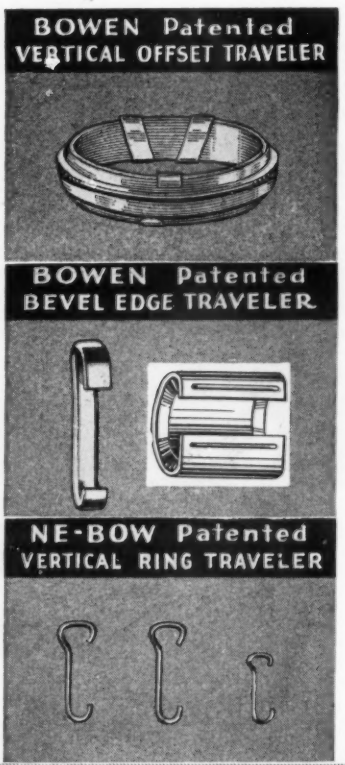
The

Sealed metal containers guarantee that your U. S. Travelers will reach you in perfect condition, with no tampering or loss in count.

★ The BOWEN PATENTED VERTICAL OFFSET TRAVELER has proven its worth in the twisting of cord and plys where uniformity of twist elongation and increased breaking strength are important factors. This design prevents a gripping or binding effect, giving an even tension, an evener rounded product and longer life to the traveler.

★ The BOWEN PATENTED BEVEL EDGE enables the swirling of the end, in passing through the traveler, to produce ideally smooth even yarn. There are no angular edges to flatten the end, which is not true of the ordinary type of ring travelers. This feature eliminates split ends in the throwing of rayons and silks, and does away with fly waste in the spinning and twisting of cotton, wool, worsteds, asbestos and kindred fibres.

★ The NE-BOW PATENTED VERTICAL RING TRAVELERS have been developed to meet the particular needs of the silk and rayon trade in the process of throwing, due to the adoption of the vertical ring, particularly of the lubricating type. When a traveler of this type is at rest, it will lock on the outer upper surface of the ring, preventing the unthreading of the end, due to excessive twist as required in silk and rayon yarns. The creeping of the traveler by the twist imparted in the end is retarded, preventing the kinks which are so detrimental in the promotion of quality products.



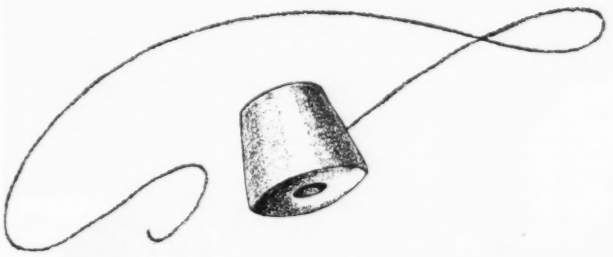
UNIVERSAL RING

BOWEN ROUND POINT TRAVELERS
BOWEN SQUARE POINT TRAVELERS
BOWEN IMPROVED VERTICAL BRONZE
BOWEN PATENTED BEVEL EDGE
BOWEN PATENTED NE-BOW VERTICAL
BOWEN PATENTED VERTICAL OFFSET
BOWEN FLAT OVAL AND ROUND
WIRE TRAVELERS

Nation has a Word for it

. . . . AND SO DO WE!

PREPAREDNESS



National Preparedness means an increased business for the textile industry, as hundreds of mills are engaged in the gigantic task of equipping the largest peacetime army in our country's history.

But the preparedness program is more than a business booster; it is a challenge to the entire textile industry to produce more efficiently, more prolifically, more economically. This challenge is being met. Textile mills are meeting increased demands for a wider variety of textile items, producing these goods according to government specifications.

These orders won't wait. Now is the time to check every item of operating equipment and supplies to assure maximum efficiency in your plant.

Efficient spinning room operation calls for the correct ring traveler for every job. U. S. Ring Travelers furnish a proven product for each need, insure smooth production at a minimum cost. Durable, precision-made, U. S. Ring Travelers actually cost less because they operate longer and more efficiently.

Samples for your exact requirements submitted upon request. Write to our nearest representative and let him show you a simple way to achieve improved spinning room operation.

U.S. RING TRAVELER CO.

U. S. RING TRAVELER CO.

PROVIDENCE, R. I. GREENVILLE, S. C.

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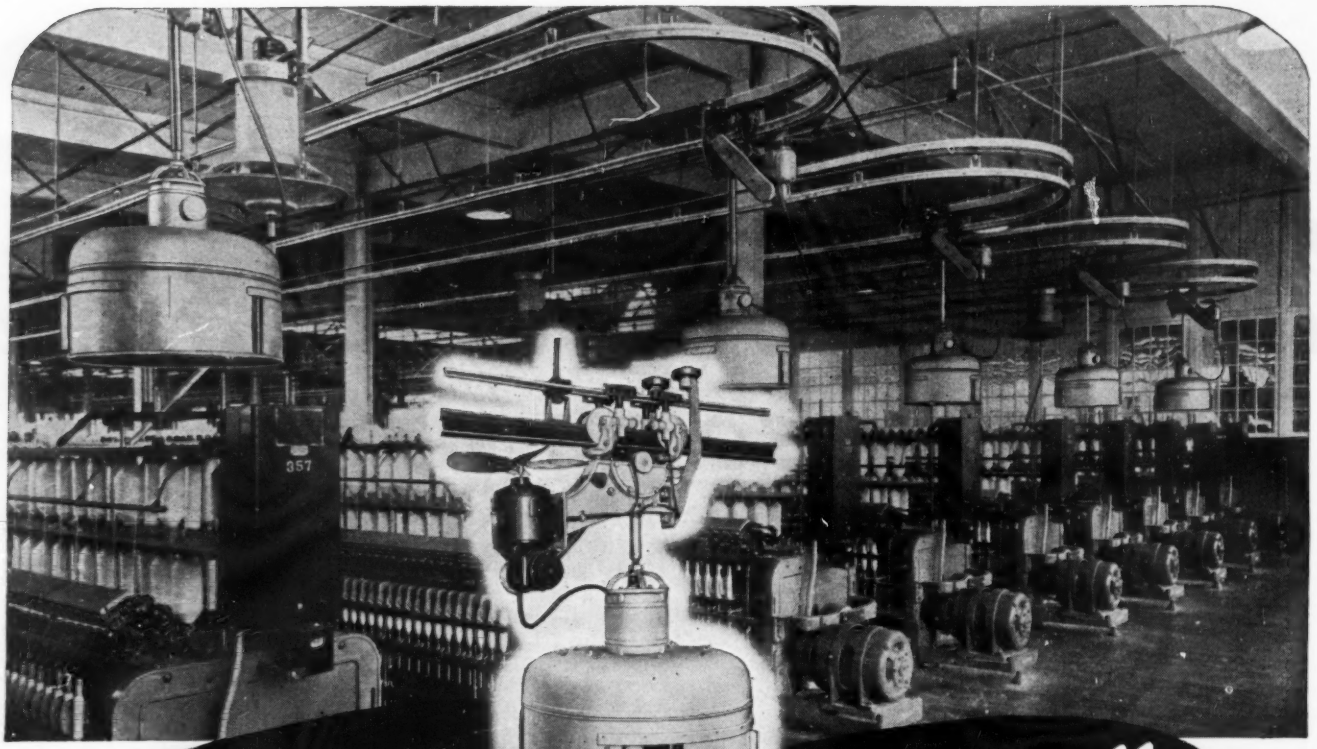
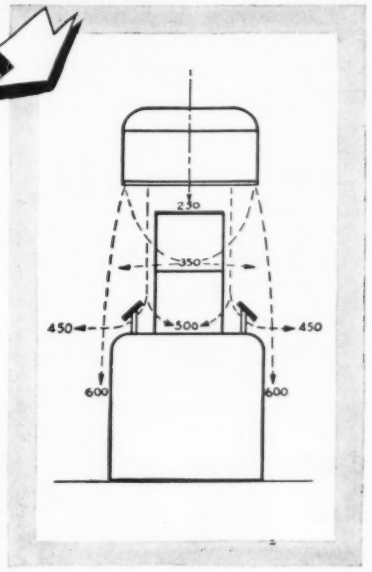


CLEANING IS DONE *Better, Quicker* AND *More Economically* WITH AMERICAN MONORAIL *Automatic* OVERHEAD CLEANERS

IN many mills, hand cleaning has given away to automatic cleaning. Over spinning, winding, twisting and warping machinery, American MonoRail Automatic Overhead Cleaners have proved successful in cleaning frames and ceilings and preventing accumulation of lint. With this scientifically designed blower that passes at short, regular intervals over the machine, supplying swirling currents of air, carefully directed and adjusted to meet varying conditions, hand cleaning is greatly reduced. Automatic cleaning keeps machines producing full time, enables operators to increase their output and reduces the number of gouts or bunches in the yarn.

Let an American MonoRail Engineer explain further advantages and economies of "Controlled Cyclonic Cleaning" or write for copy of 24-page book.



Indicates average values of air currents in feet per minute. Correct velocity where needed most . . . note that the highest velocities circulate around the bottom creel board and the roll stands.

THE AMERICAN MONORAIL CO.
13106 ATHENS AVENUE **CLEVELAND, OHIO**

JUL 18 1941

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COTTON
SERVING THE
Textile Industries

Volume 105 JULY, 1941 Number 7

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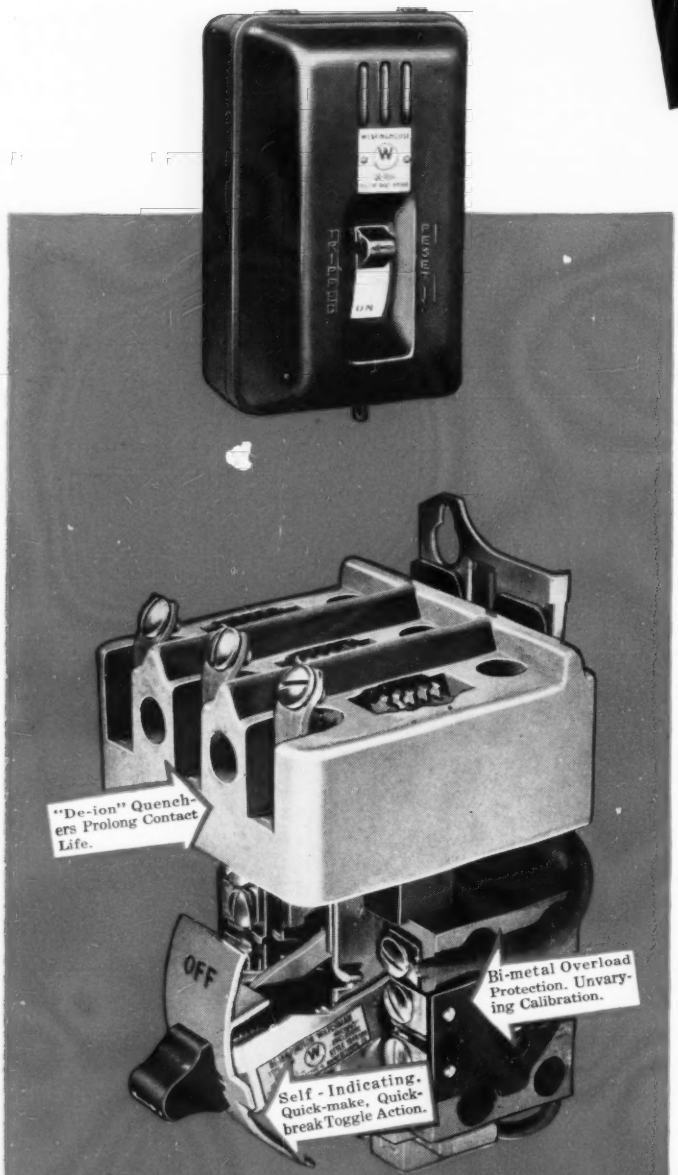
IT'S EASY TO see

"ON" "TRIPPED" "OFF"


"De-ion" Quenchers Prolong Contact Life.
OFF
Bi-metal Overload Protection. Unvarying Calibration.
Self-Indicating. Quick-make, Quick-break Toggle Action.

WITH THE WESTINGHOUSE LOOM SWITCH MANUAL MOTOR STARTER

For Motors Up to 7½ HP
Class 10-100

Easy to Install

Compact design but with ample wiring space. Concentric knockouts on top, bottom, sides and back make installation easy. Top screw holes in back of cabinet are keyhole-shaped. Bottom holes oblong for quick lining up. Straight-through wiring—line to top —load at bottom.

Lower Maintenance

"De-ion" quenchers prolong contact life. Bi-metal provides unvarying accurate overload protection. Trip-free switch—cannot be held closed against overload. Quick-make, quick-break prevents "teasing". All metal parts tinned or cadmium-plated. Silver-to-silver, double break contacts. Deep-drawn cover and contact inspection window on arc quencher make maintenance easy.

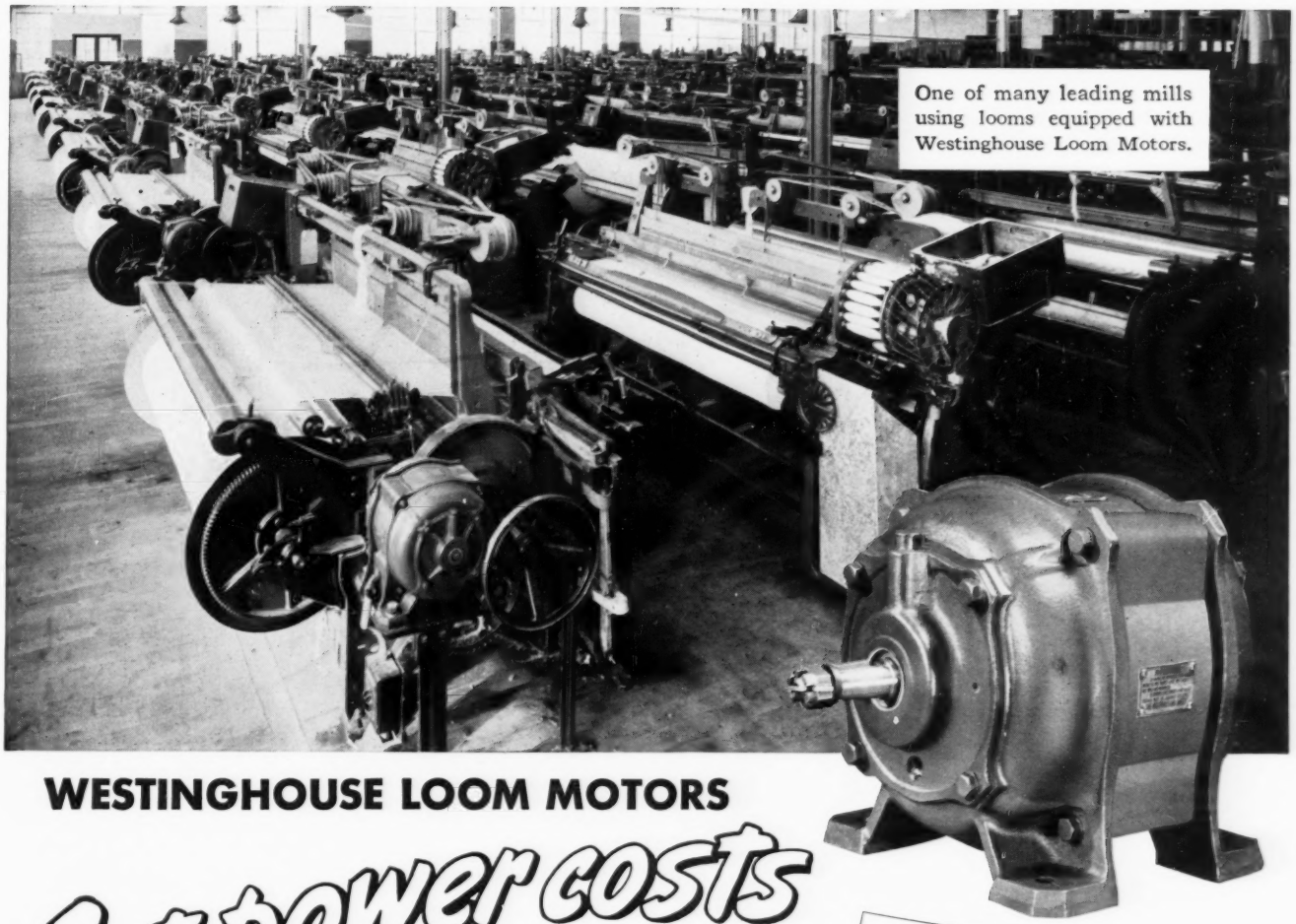
Westinghouse Electric & Mfg. Co.
East Pittsburgh, Pa.

J-21161

Westinghouse

"DE-ION" LOOM SWITCH

W WESTINGHOUSE ELECTRIC



One of many leading mills using looms equipped with Westinghouse Loom Motors.

WESTINGHOUSE LOOM MOTORS

Cut power costs

ON MODERN HIGH-SPEED LOOM LOADS!

The real measure of what a motor means in yards of cloth produced per kilowatt-hour, is told in its performance under actual loom load. This load varies widely with every pick, from an extreme point at which the motor is acting as a generator, to over twice its full load as a motor.

Westinghouse Loom Motor efficiency is maintained at a high point throughout the entire pick cycle with the result that kilowatt-hours consumed are reduced. Investigate what today's Westinghouse Loom Motors can offer you in possible savings as well as in over-all improved loom drive performance. See your Westinghouse representative or write Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., Dept. 7-N.

SPECIALLY DESIGNED to take peak loads with less power.

•

AMPLE RESERVE CAPACITY for "breaking-in" period.

•

UNIT FRAME CONSTRUCTION and vibration-proof fittings. Saves maintenance.

•

LONGER LIFE—extra ruggedness adds years to life of motor.

•

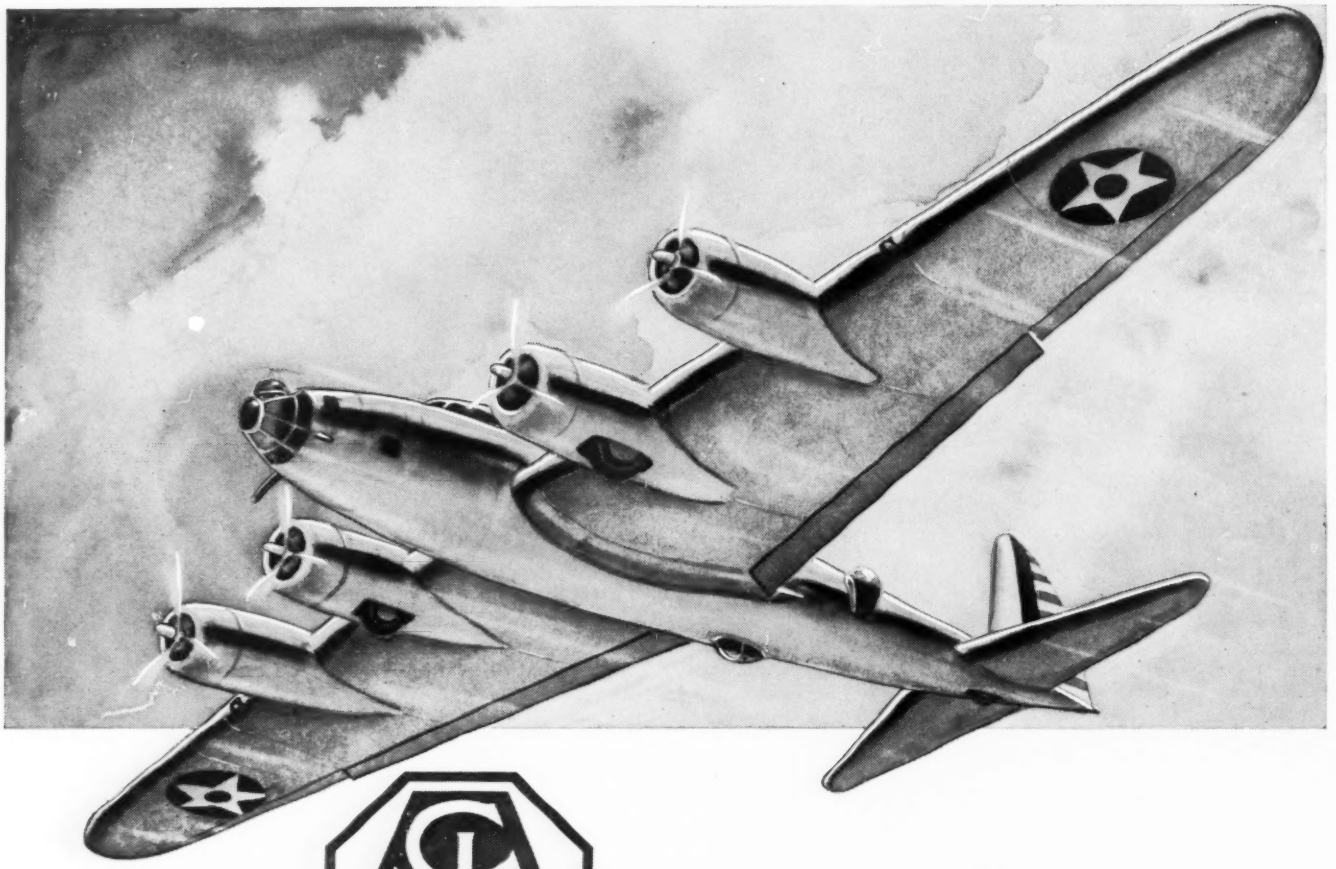
Specify Westinghouse motors for your looms and be sure of getting all these features.

J-90425

Westinghouse

LOOM MOTORS

W WESTINGHOUSE ELECTRIC



LEADERSHIP

Four radial engines wake to roaring life — four snarling propellers bite the air. The great plane lumbers down the runway — lifts — begins her climb. Bristling with machine-guns and light cannon — with a bomb-load totalling thousands of pounds — with fuel capacity for a Trans-Atlantic bombing flight if required, the Flying Fortress demonstrates our country's LEADERSHIP in aircraft construction.

The familiar octagon trade mark is Ciba's symbol of Leadership in the field of dyes and chemicals for the Textile Industry.

THE CIBA LABORATORY
Exists to Serve You
Ciba Chemists, Colorists and Service Technicians are ready at all times to co-operate with you in the solution of your problem. Please feel free to call upon them.

ACETATE BLACKS
of Proven Merit

CIBACETE DIAZO BLACK GNSP
(DISPERSED TYPE)

CIBACETE DIAZO BLACK PS NEW
(SOLUBLE TYPE)*

*NON-DUSTING TYPE CAN BE FURNISHED

On all acetate, and acetate and rayon mixed fabrics, these developed blacks CONTINUE to give the utmost in —

★ BLOOMINESS OF SHADE
★ FREEDOM FROM SUBLIMATION
★ ECONOMY
★ ALL AROUND SATISFACTION

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PROVIDENCE *BOSTON • CHICAGO • CIBA CO., LTD., MONTREAL • PHILADELPHIA • CHARLOTTE • SAN FRANCISCO*

SHORTS AND REMNANTS

WATCH CHARM FREE

One of our good advertisers, Jenkins Bros., have an interesting free offer to "Cotton's" readers. If you wear a watch chain, they will be glad to send you a handsome valve charm for it. Even if you wear a wrist watch, you are eligible. All you have to do is send your name and address on a penny post-card to: Jenkins Bros., Dept. VJ, 80 White St., New York City.

Manhattan Rubber Wins Advertising Award

The Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., Passaic, N. J., won first award in the annual contest of the National Advertising Agency Network for "The Best Advertising Campaign in Business Papers". 151 campaigns were entered under this classification, through the 25 member agencies. To James J. DeMario, advertising manager of Manhattan, and The Roland G. E. Ullman Organization, the agency, congratulations!

◆

Inflation

" . . . I have been very much interested in reading articles in Barron's on inflation, particularly one which suggested real estate. I have a friend in Paris whom I saw in 1936. I asked him about a safe investment and he stated there was only one, and that was a small farm. He said if you had a large farm they would take it away from you, but would let you keep a small one. I am afraid a farm would not be of much use to me as I know nothing about farming."

ELLISON S. McKISSICK

President,
Alice Mfg. Co.,
Easley, S. C.

" . . . Your editorial on inflation and wage-increase spirals [May issue] is very timely and I agree with the philosophy expressed."

JOHN H. CHEATHAM

President,
Georgia-Kincaid Mills,
Griffin, Ga.

" . . . I certainly concur in connection with your excellent editorial on inflation. . . . "

EARLE R. STALL

President,
F. W. Poe Mfg. Co.,
Greenville, S. C.

◆

Old-Timer, 1932

"I would like very much to know if there are available any reprints of 'The Story of OLD-TIMER'S Methods of Working and Management'."

P. H. BURRUS, JR.

Supt. Sheeting Mill,
Marshall Field & Co.,
Draper, N. C.

(This series, covering 20 installments, ran from February 1932 to June 1934. Reprints are available at a nominal cost.)

Cotton Publicity Campaign

"We have been following with interest the national publicity campaign being staged in behalf of the cotton producers. . . . One of our accounts is the Ames Bag Machine Company, a maker of cotton bags, and we should like to tie in with the cotton campaign if possible."

RALPH MAITLAND

Maitland & Reinhard,
Cleveland, Ohio.

(Those wishing to tie in with the national campaign in behalf of increased cotton consumption should write to The Cotton-Textile Institute, 320 Broadway, New York, N. Y., and National Cotton Council of America, Memphis, Tenn.)

◆

Bobbin Painting

"Please give us the name and address of people who were demonstrating at the Textile Show a bobbin painting machine. . . . "

E. W. HILL

Dixie Mercerizing Co.,
Chattanooga, Tenn.

(This machine was demonstrated by D. A. Jolly, formerly of Cannon Mills, and full information can be secured from Sherwin-Williams Company, 222 West First Street, Charlotte, N. C. Also, see description, page 80, June COTTON.)

◆

Swell Job—Lots of Adv.

" . . . I was greatly impressed with the number of advertising pages in this issue. This is real proof that your magazine must be doing a swell job."

EMIL STEIGER

Deltox Rug Co.
New York, N. Y.

We Helped Pick Her!

• Pretty Peggy Smith won the title as Griffin, Ga.'s, Cotton Queen at the recent Cotton Festival in that city. We believe you will agree with the judges after looking over the above picture of Miss Smith, who is a roller-picker in the Griffin Division of Thomaston Cotton Mills. The Editor of "Cotton" and T. M. Forbes, secretary of the Cotton Manufacturers Association of Georgia, were two of the three judges.

SPECIAL OFFER

In clearing out some files, we have available a few copies of most of the issues of "Cotton" for the years 1938, 1939 and 1940.

These will be given to subscribers who request specific issues during those years, so long as this limited supply holds out.

Check over your files, and if a few are missing, tell us which ones—but hurry!

◆

Another Good Knitting Paper

"One of our subscribers, Berga Halla, of Klingenberggt. 5, Oslo, Norway, would like to get a sample of your publication. . . . "

SYBIL ROBINSON

The Underwear & Hosiery Review,
New York City.

◆

Handling Salesmen

"The article about the salesman and his recommendations in regard to the handling of these very important members of the textile industry [page 68, May issue] is of particular interest to me, because for a long time I have tried to carry out the methods recommended in this article."

W. H. TAYLOR

President,
Newnan Cotton Mills,
Newnan, Ga.

"I sincerely hope that our mill is in the classification more favorably commented upon by Mr. Elddepa in his interesting article on salesmen in your May issue. I am sure that if more of us were on the other side of the desk for a while we would be much more considerate of the other fellow who, along with his duty of selling goods, is really trying to give help to us."

HAROLD MERCER

Vice-President,
Firestone Cotton Mills, Inc.,
Gastonia, N. C.

◆

"Handling Large Beams"

"Will you send me the article 'Handling Large Loom Beams', by R. A. Butler in the January issue of 1938?"

ROBERT NEWELL

Jewett City, Conn.

◆

Splendid Work

"I think you and COTTON are really doing a splendid work for the industry and there are a lot of us who appreciate what you are doing."

PAUL K. McKINNEY

President
Swift Manufacturing Co.
Columbus, Ga.

◆

Again, Bleachers Needles

"We note . . . a reference to 'bleachers needles.' As a matter of general information, we shall appreciate any information you can supply us regarding the general appearance and use of this needle."

H. E. GARBARINO

Tubize Chatillon Corp.,
New York, N. Y.

(Our bleachery friends didn't seem to know of a bleachers' needle and we wrote Astrup Company, Cleveland, Ohio, regarding a regular spring-eye 5-inch needle. $1.00 cash reward will be offered to the first reader writing us what bleachers needles are and where they can be secured.)

Your Sacrifices Help National Defense Program

To all of our textile mill customers we wish to express sincere appreciation for the fine spirit you are showing in complying with the power curtailment program. With characteristic patriotism you have placed the needs of National Defense above your personal interests.

Without your voluntary help, the reduction could not have been made effective, and some sort of governmental intervention would have been necessary to prevent a collapse or paralysis of the power supply.

We are fully aware of the sacrifices you are making to comply with this program. We regret them, but they are unavoidable.

While this is only an indirect comment on the problem, we may also say that you were not asked to make *any* sacrifices *at all* until we had made *every* sacrifice within our power. Every fuel-burning generating plant has been put in service — no matter how inefficient, or expensive to operate. We have bought every kilowatt hour available from other states, regardless of price.

Many of you know that obsolete plants in your own mills are being operated for the first time in many years — at a substantial loss to us.

These things can't be helped. What matters most is that the service has been kept going largely through your patriotic willingness to sacrifice your immediate interests for the Defense Program in a time of national emergency.

GEORGIA POWER COMPANY

COTTON
Textile Industries
Vol. 105 July, 1941 No. 7

No "Loot" for Anyone

CONGRESS MUST shortly undertake its most unpleasant and depressing duty—the consideration of a real tax bill. After blithely appropriating billions of dollars to descend like the gentle dew of Heaven on every parched industrial area, Congress has now got to consider a practical plan for getting this money, and then getting it back again and again after it has been spent, without resorting to the threadbare expedient of merely taking it out of the banks and stuffing some I.O.U.s into the vaults in place of the money.

If Congress will really tackle the impending tax bill courageously, it can be made to serve a triple purpose: It can produce much needed revenue without kidding anybody about where the money is coming from; it can hold down inflation, and it can make everybody realize the extent to which he is participating in National Defense by making him realize that he cannot profit from the defense spending. Unless Congress does approach the tax bill in a courageous and statesmanlike manner we will simply have a patched-up mess that may produce some revenue, but will touch off an inflationary conflagration.

NOBODY LIKES to be taxed, and practically everybody can think up innumerable reasons why the taxes should rest heaviest on somebody else. The textile industry is no exception to this common trait. The textile industry has probably had a little tougher sledding than almost any other American industry, because its depression began about 1921 and was in full blast when the rest of the country was going hog wild on its spending spree. If there is an industry that ought to be allowed to accumulate a little fat, it is probably textiles; yet the industry might just as well realize that there isn't any fat in war spending or in defense spending when preparing for possible war. The money which goes for such purposes isn't real money; that is, it doesn't represent any possible increment in the national wealth. War spending or defense spending represents a dead loss of national wealth without the slightest possibility of adding anything to it. Of course there will be a few profiteers who will get away with a fortune whenever money is liberally set in motion, but there can only be a few, and better than 99 per cent of the people can expect to be poorer and in most ways worse off after this boom than they were before it.

Textile industrialists, in common with all other industrialists, might as well make up their minds that there can't be any real profits making goods that do not represent an increment in the national wealth. If the nation could even hope to maintain the normal profits in the operation of national business it would be extraordinarily fortunate, and the idea of excessive profits might as well be abandoned, and we all might as well make up our minds that this defense program has got to be carried out very largely on a pay-as-you-go basis. The credit of the United States Government has already been strained to the breaking point, and the interest on the national debt now amounts to more than it cost to run the whole Federal Government 25 years ago.

TO KILL three birds with one stone, Congress could pass a tax bill covering excessive profits and excessive wages. The owner of a business could be required to pay the major portion of excessive profits to the Federal Government as taxes, and he could also be required to pay to the Federal Government as taxes the major portion of any wage increases that he puts into effect during this emergency. The Federal Treasury has got to get the money somehow and everybody has got to contribute some of it, and that would be as good a place to start as any. Canada imposes a 75 per cent excess profits tax, and Canadian business men claim that this has acted as a very effective brake on profiteering and inflation. Any business man is allowed to earn without penalty the average amount that he has earned for the four years preceding the war, and any profit in excess of that is taxed on this 75 per cent basis. A number of Canadian business men who have expressed opinions to us in this matter seem to feel that this is a fair arrangement, because it destroys the incentive to jack prices up and try to make excessive profits. The Canadian tax law has suitable provision for businesses which have been operating unprofitably over a period of years, and they are allowed to make a certain amount of stipulated profits before the excess profits tax takes effect, but the whole arrangement seems to have exerted a very stabilizing influence on Canadian business.

A tax on excessive wages would also have the same

effect. If a certain firm had been paying certain wages over a period of several years, and any increase in the rate of pay for the same work was made effective, the Government could levy a heavy toll on this increase in pay just as logically as it could levy a heavy toll on an increase in profits, and such an arrangement would have the undeniable advantage of holding down inflation and eliminating most of the strikes that are not actually Nazi or Communist instigated. Congress might perhaps faint in a body at the thought of the political dynamite contained in any such suggestion as taxing wage increases, but the idea has merit. We can't arm our country or defend it with appropriations alone. It takes work and lots of it, and unless the appropriations will buy work, we will never get the job done. The only way to get these appropriations to buy the amount of work they should is to hold down inflation, and the only way to hold down inflation is for everybody to work a little longer and harder than he would like to or has been accustomed to, and never forget that in times like this he is going to have less instead of more. Until we get over this "more" psychology, we will never get anywhere with our defense program. Until people are willing to get along with less of the things they have been accustomed to so that we can have more of the things we have never needed in such abundance before and now so desperately need for national defense, our national leaders have not done a good job of selling the public on the urgency of our needs. Here is a chance for Congress to put it squarely up to the people in one simple gesture and make it perfectly plain that this is a big job that everybody must participate in and that nobody can make anything off of.

THE RECENT STRIKE at Inglewood, California, showed clearly the widely prevalent desire to get more out of the defense program rather than trying to put something into it. An aerial picture of a mass meeting of the strikers was published in the Sunday Supplements, and presented a situation that probably no people on earth except the American people could understand. There appeared to be literally acres of automobiles parked around the strikers' mass meeting. In no other country in the world could people coming to a meeting of strikers for higher pay come in their own cars. Other pictures of this Inglewood strike showed pickets bearing placards saying "We cannot support our families on 50 cents an hour". What they really meant was that they couldn't support their families on what was left over from keeping up the automobile, and they needed higher wages because naturally everybody had to have an automobile, whether he could afford it or not.

This Inglewood strike also brought to light another situation of particular interest to the southern textile industry. Testimony of some of the strikers indicated that they were paying exorbitant rents and therefore really needed more pay to cover these rents. The southern textile mills, particularly, have long since realized that large manufacturing plants established in out of the way places must provide their own housing to keep the help from being exploited by high rents charged by individual property owners. This situation at Inglewood calls for a relief of the housing shortage to reduce profiteering. To increase wages merely to cover unconscionable profiteering in rents is not the answer to the problem. What the people in Inglewood need is more homes at fair rentals, and not higher wages to pay fantastic rents. The granting of large wage increases for any such purpose is highly inflationary and sets a very bad example for other industries.

While the Federal Government has been releasing hundreds of millions of dollars for housing projects all over the United States, it has not been explained why some reasonable provision has not been made for housing the workers in these wartime industries, and any cotton mill management would probably find it difficult to understand why a plant employing 12,000 people could be built without making some sort of provision for the decent housing of these people. One Inglewood workman testified that his earnings averaged $135 a month and he had to pay half of this for the rent on a very small cottage. This man was evidently a mechanic making around 75 or 80 cents an hour. He was therefore, under the conditions, in practically the same income bracket as a textile worker making 45 cents an hour and renting a house for about $5.00 a month with lights and water thrown in.

There are undoubtedly other labor disturbances in defense plants where housing shortages and high rents are at the root of wage demands. These should be demands for cheaper housing instead of higher wages. It is almost certain that most of the demands for higher wages are based on the belief that these demands will be met rather than on any actual necessity.

THE NATION'S living standard is certainly going to be reduced before we get through this emergency, and the sooner we recognize it and all make up our minds to pay taxes and lots of taxes, and put practically all of our excess profits and wage increases back into the Federal Treasury, the sooner we are going to get this defense movement on a realistic basis. In practically every strike that has claimed national attention, the strikers have advanced as one reason for their demands, the belief that their employers were cleaning up on their defense orders, and that the workmen were entitled to their share of the loot. It ought to be a rather simple matter for Congress to see to it that there isn't any loot for anybody.

Wage-Hour Ruling Modified

In accordance with the plant protection policy of the War Department announced on June 4, General Philip B. Fleming, Administrator of the Wage and Hour Division, U. S. Department of Labor, said recently that in his opinion time spent traveling from fences, walls, or other anti-sabotage barriers to working places will not be considered to be working time under the Wage and Hour Law.

General Fleming warned that where a state law specifically requires that such travel is working time, the position of the Wage and Hour Division cannot set aside the state statutory requirement. Furthermore, where by an agreement reached between the employer and the employees provision is made for treating such time as hours worked, this interpretation will not excuse failure to comply with such agreement. Guards who arrive at the entrance to such barriers and immediately change uniform and start performing duties would be considered to be working from the time they passed the barrier, General Fleming said.

Photos, John C. Fonville of COTTON.

These photos show progressively the method used to measure the diameter of the roving bobbin, layer by layer of roving. At left the roving is run through the automatic roving tester, with a record being made on the chart. This has no relation to the method of testing bobbin diameter, but the test man does two jobs at once. He counts the layers of roving unwound from the bobbin, and when the necessary layers are unwound, he measures with his caliper (center photo) which in this case is a home-made device. At right, a close-up of taking measurement on bobbin diameter being unwound on automatic roving tester. The roving tester unwinds the bobbin without manual effort. The tester can watch the evenness of the roving and count the layers of yarn removed from the bobbin. For other methods, see accompanying series of photos.

Let's Look at the Roving Bobbin

(*A Study of Tension and Lay Control*)

By John Duerst

Clark Thread Company of Georgia

EVERY spinner agrees that a good roving bobbin should not have a single layer of stretched roving for the entire length of roving wound on the bobbin.

A perfect roving bobbin may be wound hard or soft, as long as the increasing diameters keep in step with the gradually changing pressure of the presser finger.

The roving is practically pressed flat on the surface of the bare bobbin. From layer to layer this condition is gradually eliminated due to less pressure, until at a certain diameter of the bobbin the roving takes on its original round form. This change is undoubtedly performed according to a certain law. The purpose of the following studies is to find ways and means to discover the exact functions and to try to find the law which must be followed to attain perfect bobbins.

This can be done with the help of accurate measurements by measuring the diameter of the bobbin from layer to layer while being built or from a full bobbin which is unwound and so measured.

A typical bobbin measured every ten layers, for instance, came out by ratio comparison as follows:

Layers	0	10	20	30	40	50	60	70	80	90	100	110
Thickness of Roving	0	1	2.03	3.05	4.2	5.3	6.46	7.7	8.92	10.25	11.6	13.1

While the thickness of the ten layers from 10 to 20 increased 3 per cent, the ten layers from 100 to 110 increased 13 per cent.

The idea is now to find from the given layers and the measured thickness of roving on the bobbin the "angle" of the curve that is behind these steadily increasing thicknesses. "Curves" and "angles" should not disturb us here. The whole procedure does not require higher mathematics but can be done easily by an accurate worker who is taught to do the job.

The result of the procedure is simply described as follows:

Since it is a fact that the thicknesses of roving piled up on the bobbin are progressively increasing, the evenness of tension may be reflected by measuring these thicknesses at equal intervals and through certain calculations express the comparative thickness of the first layer of roving.

For instance, if we can prove by calculation that, if the first layer was "b", the 50th layer by calculation had also come out to be "b" by comparison, we then may assume that so far (from the first to the 50th layer) the winding had progressed to order, therefore, making even work.

How to Measure the Bobbin

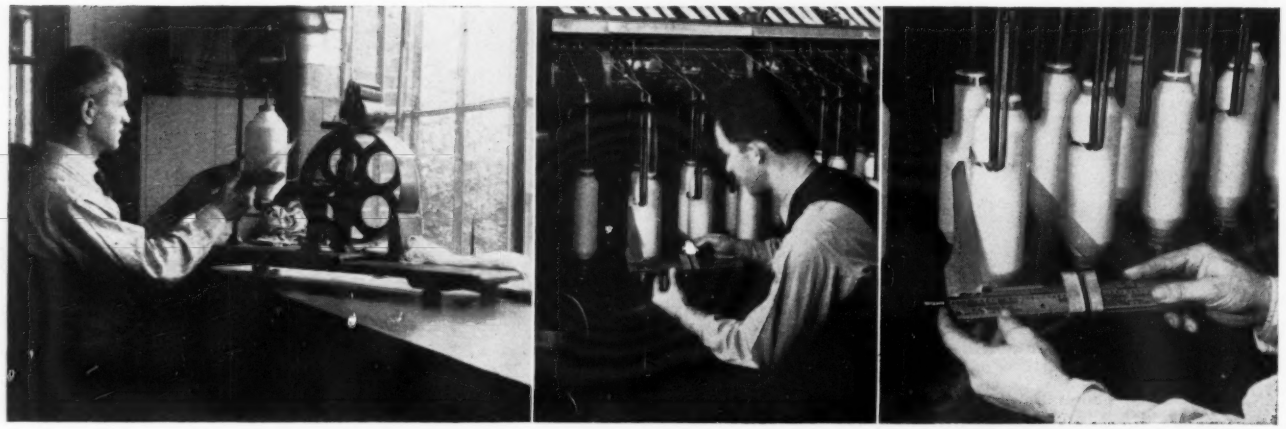
The only tool needed to measure the bobbin is a caliper to measure the bobbin's diameters as it is built upon the frame, or easier, as the full bobbin is unwound. This may be a wooden affair big enough to measure a 5-inch bobbin.

The scale should be of fine graduation, preferably in millimeters, since readings are more easily made according to the decimal system.

There are two ways to make the diameter thickness tests, first by measuring at equal intervals while a frame is running, filling up a bobbin or by reeling off a full bobbin and do the test in the laboratory. A step by step performance of the latter method will be considered here as an example.

The object for a test is a full roving bobbin of 9x4½-inch size. The hank count is 2.00 hank. The bobbin is brought directly from the frame, perfectly round and unspoiled.

The first measurement of the full bobbin taken was found to be 112.1 mm. After winding off 10 layers the measurement was 103.4 mm. (The decimal mms. were taken by naked eye so may be slightly

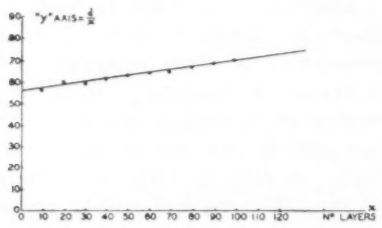


All mills are not equipped with automatic roving test rs, and in such instances the hand reel pictured above at left may be used for unwinding the layers of roving from the bobbin; the di ameter of bobbin is then measured in the usual manner. Center picture, the diameter of the bobbin may be measured while the bo bbin is being filled on the roving frame, though this method is not recommended because of time involved. Right, close up of bobbin diameter being measured on frame.

off the true measurement.) This procedure was continued every 10 layers wound off on a roving sizing roller until, after the 90th layer, only 8 layers came off to reach the bare bottom. The bobbin, therefore, had 98 layers altogether and the empty bobbin measured 42 mm. All measurements are tabulated and then calculated as shown in Table 1.

We may now leave off here and make a graphic picture from the results. We select for this purpose coordinate (regular square) paper and on the bottom line mark in the No. of layers "x", while the vertical "y" is spaced for the ratio which is obtained by dividing the thickness of roving "d" by the respective number of layers "x".

The accompanying graph shows the exact position of each thickness ratio against the number of layers.



The straight line drawn is the approximate indicator for evenness of wind. The picture of our example suggests a good bobbin.

The mathematically minded tester will not be satisfied with the graph alone, but will want to know further details, by having each ratio properly compared with the position in the field. This is done with the use of the "straight line-law" application.

Layers Reeled Off	"x" No. of Layers	Overall Dia. mm.	"d" Overall Dia. less Bobb. Dia.	"y" Ratio d ÷ x
Full 0	98	112.1	70.1	.717
—10	88	103.4	61.4	.698
—10	78	95.3	53.3	.683
—10	68	87.2	45.2	.666
—10	58	80.3	38.3	.660
—10	48	73.0	31.0	.645
—10	38	65.9	23.9	.628
—10	28	59.0	17.0	.607
—10	18	52.9	10.9	.606
—10	8	46.6	4.6	.576
— 8	0	42.0	0	—

Table I

Every single ratio therefore must be balanced with the number of layers multiplied with the slope coefficient "m" plus the comparative thickness of first layer "b".

$y = xm + b$

$$\frac{d}{x} = xm + b$$

$$\frac{\text{Thickness of roving}}{\text{No Layers}} = (\text{No. layers} \times m) + b$$

"m" and "b" being unknown are to be calculated.

This is to be done as follows:

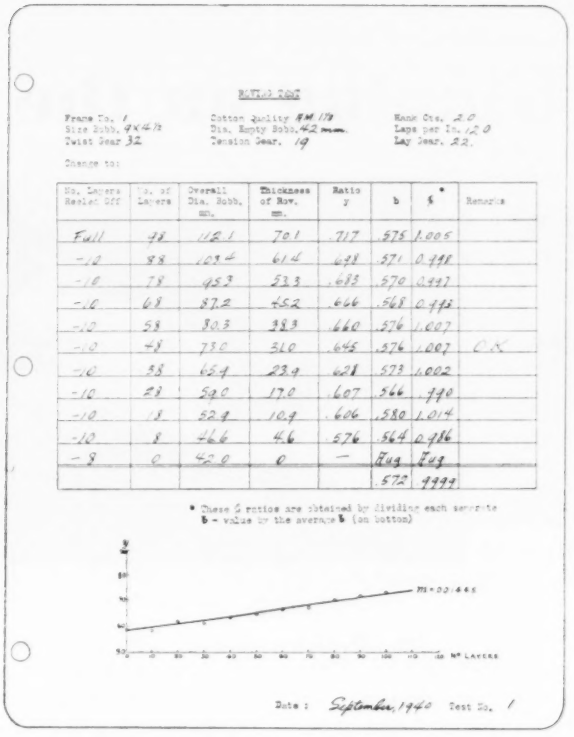
Select two groups of $y = xm + b$ by adding each member, then subtract the second from the first, thereby eliminating "b" as an unknown and solve to "m".

"m" solved thus, use in equation to solve for "b" and consequently every separate "b" may be calculated with "m" constant.

Scanning the separate values of "b" we note that the variation is strikingly small, indicating an even wind. Proper interpretation of the "b" values will show where the tension is off. This skill has to be acquired. Suffice it to say that the "b" values for an even wind should as much as possible be alike, and it does not really matter if one

	$\frac{d}{x}$ Ratio y	$xm + b$			Separate Value of b
3.424	.717	$= 98m + b$	$+ 3.424 = 390m + 5b$	—	.575
	.698	$= 88m + b$			.571
	.683	$= 78m + b$			.570
	.666	$= 68m + b$			.568
	.660	$= 58m + b$			.576
3.062	.645	$= 48m + b$	$+ 3.062 = 140m + 5b$		.575
	.628	$= 38m + b$			.573
	.607	$= 28m + b$			.566
	.606	$= 18m + b$			.580
	.576	$= 8m + b$	$.362 = 250m$		.564

$m = .001448$
$b = .5719$



Method Used

Frame No. 1 | Cotton Quality FM 1/8 | Hank Cts. 2.0
Size Bobb. 9x4½ | Dia. Empty Bobb. 42 mm. | Lays per In. 1.20
Twist Gear 32 | Tension Gear. 19 | Lay Gear. 22.

Change to:

No. Layers Reeler Off	No. of Layers	Overall Dia. Bobb. mm.	Thickness of Rov. mm.	Ratio y	b	$ *	Remarks
Full	48	112.1	70.1	.717	.575	1.005	
-2	46	109.4	61.4	.628	.571	0.998	
-2	44	105.3	53.3	.685	.570	0.997	
-2	42	87.2	45.2	.646	.568	0.993	
-2	40	80.3	38.3	.660	.576	1.007	
-2	38	73.0	31.0	.645	.576	1.007	C.K.
-2	36	65.4	23.4	.628	.573	1.002	
-2	34	59.0	17.0	.607	.566	.990	
-2	32	52.4	10.4	.606	.580	1.014	
-2	30	46.6	4.6	.576	.564	0.986	
-2	0	42.0	0	—	Eug	Eug	
					.572	9999	

* These $ ratios are obtained by dividing each separate b - value by the average b (at bottom)

Date: September, 1940 Test No. 1

bobbin of a certain hank has a slightly higher or lower "b" as long as they are of the same value throughout their respective bobbins.

"b", as we may guess, is the calculated comparative thickness of the first layer. To make a roving diameter test more complete we may run a few yards from each 10 layers through a roving tester to counter check the tabulated findings.

Through lay and tension gear manipulations we can easily attain a perfect bobbin.

The proper lays per inch to start with may be determined by using Duerst's formula:

$$\text{Lays per inch} = 4 \times \left(\sqrt{1 + 8 \times \text{Cts}} - 1\right)$$

The accompanying roving test is filled in with complete data of a roving diameter test made by unwinding a bobbin on a reel. While this form is only suggested, any other additional information may be registered, such as outcome of test graph on a roving tester, etc.

In studying this test and especially the graph. it should be borne in mind that the angle or direction of the line has no bearing on the subject, the only consideration is that the *line must be straight.*

Other discussions by Mr. Duerst, "The Duerst Formula" Jan. '39 page 56; "The Duerst Method of Figuring Progressive Yarn Twist" Dec. '39 page 64; "Theory of Yarn Skein Strength" Nov. '40 page 53. John Duerst is research engineer for The Clark Thread Co. of Georgia, Clarkdale, Ga.

Cotton-Textile Institute Establishes Research Division with John T. Wigington in Charge

Establishment by The Cotton-Textile Institute of a division of cotton research, and appointment of John T. Wigington as its director, were announced last month by Claudius T. Murchison, president of the Institute. Headquarters for the division will be at Clemson College, S. C. Mr. Wigington will assume his duties there in August.

The first function of the new department will be to survey all cotton research projects now under way in cotton manufacturing plants, college and university laboratories and government agencies. This information, when assembled, will be analyzed and appraised and the findings made available alike to manufacturers and research specialists.

Mr. Wigington

A second function will be to co-ordinate existing research activities for the purpose of mutual aid and the avoidance of duplication.

A third purpose is to ascertain in what directions research activities can be guided with the most beneficial results and to formulate projects which will have the greatest practical value to industry and to cotton consumption.

The new office will maintain close working relationships with such groups as textile technologist, the Textile Foundation, the U. S. Institute for Textile Research, the U. S. Government laboratory in New Orleans, the textile schools and agricultural experiment stations, as well as with corporation laboratories in the industry.

Mr. Wigington has been in charge of the cotton fiber and spinning research laboratories of the U. S. Agricultural Marketing Service at College Station, Texas. He is a graduate in textiles of Clemson College, Class of 1923. After working through the mill, he became superintendent of the Lonsdale Co., Seneca, S. C., and Edna Mills Corp., Reidsville, N. C. For a time he was associated with the Textile Bag Manufacturers Association where he completed several projects designed to improve the quality and widen the use of cotton bags.

New Cotton Tire Cord Released to Mills

The Cotton Research Foundation, Memphis, Tenn., has announced the terms for release of the new cotton tire cord perfected by its scientists working at the Mellon Institute of Research. For a contribution of $500 toward the support of the Foundation's cotton research work, firms to whom the process is released will "be given all the other information and findings pertinent to the patent applied for and will have the privilege of inspecting all engineering data and drawings and test results in connection with operations under this process at the Firestone plant." Through a special arrangement with the Firestone Tire & Rubber Company the new cord has been thoroughly tested. These tests, it is stated, have confirmed the Foundation's claims of a 35 per cent greater breaking strength and a 300 per cent longer flex life.

The initial contribution of $500 will be credited against later royalty payments of 1/50th cent per pound on tire cord produced under the process, on which patent application has been made. Full details of the royalty arrangements may be secured upon request to the Foundation or from National Cotton Council of America, Memphis.

The Effects of Ginning on the Spinning Quality of Cotton Fiber

By John T. Wigington

COTTON QUALITY has been defined as the properties, characteristics or attributes of the fibers which affect their usefulness. The old saying that "you cannot make a silk purse out of a sow's ear" is certainly appropriate here, for a cotton spinner cannot take a poorly ginned sample of lint and spin a smooth yarn or weave a fine fabric from it.

Ginning, in its broad sense, is the first mechanical operation to which the cotton is subjected, and it is at this point that many opportunities occur for either destroying or preserving the inherent qualities of the lint. From the standpoint of the cotton spinner the quality of the ginned lint is a composite of the numerous lint and fiber properties which have an effect upon (1) the initial cost of the raw material, (2) the cost of manufacturing the yarns and fabric, and (3) the quality of the yarns spun and the fabrics woven.

Initial Cost: Poor ginning lowers the grade of the lint, and a poorly ginned sample usually gives in manufacture a relatively high percentage of waste material, which is more or less useless to the spinner. When the spinner purchases such cotton, therefore, he pays for an undue amount of troublesome and almost valueless matter at the prevailing rate for cotton. Of course, this price is reduced somewhat by the discount on the lower grade, but even so, such waste material is expensive at any cost. When confronted with the problem of wasty and trashy cotton, the spinner has the choice of either increasing the cost of his production by processing the cotton through additional cleaning equipment, or of reducing the quality of his finished product. In some cases it may be a combination of both.

Cost of Manufacturing: Foreign matter and short fiber must first be removed from the good cotton before any satisfactory product can be obtained. Every ginner knows that, unless he cleans his seed cotton first, he cannot produce a good sample of lint cotton. The spinner faces a similar problem when he encounters a wasty and trashy lint cotton. Such cottons require extra cleaning, which involves the increased use of machinery, power, and labor, thus raising the manufacturing cost.

Such extra cleaning operations further increase the hazard of damage to the fibers. This may introduce additional waste matter in the form of an increased amount of short unspinnable fibers, or in the undue formation of naps and neps, which may not have been originally present in the raw cotton. As cleaning is not 100 per cent efficient, some foreign matter is carried through the entire series of processes. The presence of such undesirable elements causes unevenness in the product of successive manufacturing machines.

The presence of neps, naps and particles of waste has a tendency to cause breakage of the strands of cotton in the mill as the material is carried through the various processes. Naturally these end breakages must be repaired, and in some cases this means complete stoppage of the machine. In others it may mean only the attention of the operator to "piece up" or join the broken ends while the machine continues running. In either event, however, it may mean the need for more operators, for a poorly running material requires more attention than one with a low end breakage. Production costs are thus further raised.

In the classification of cotton, grade is determined on a basis of leaf, color and preparation, the latter of which is, to a large extent, controlled by the quality of ginning. Properly ginned cotton is relatively smooth in appearance and free of naps and neps, which is an advantage to the spinner not only from the standpoint of cost of manufacture, as previously considered, but also as regards the quality of the grey and finished goods.

Poor ginning as reflected in very rough or gin-cut bales is often the result of ginning green, damp or wet seed cotton without drying at the gin and with a tight seed roll, all of which cause a tangling of the fibers, possible damage to them, a

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Abstract of an article published in *The Cotton Ginners' Journal*, Dallas, Texas, and reproduced here by permission of the editor of that publication and the author, who is associate cotton technologist, agricultural marketing service, U. S. Department of Agriculture, in charge of the co-operative cotton fiber and spinning laboratory at College Station, Texas, and who shortly will join The Cotton-Textile Institute in charge of their research activities.

roughening of sample preparation, and a lowering of grade. This damage is somewhat similar to that caused by excessive cleaning in the mill, in that the fibers may be weakened or broken, with the result that the damaged fiber adds to the wasty material already present in the original bale, and decreases the uniformity of the staple.

The presence of undue quantities of short fibers will prevent the formation of a smooth, uniform strand of yarn, because these short fibers are not evenly "drafted" in the various processes used in yarn manufacture. In turn, this may eventually cause end breakage in running through some successive operation of manufacture. Increased production cost again results, this time from unevenness of staple.

Since this non-uniformity in staple is of such paramount importance to the spinner, it is also incumbent upon the ginner to do his part in the preventing of mixed-packed bale, in which noticably different staple lengths are packed in the same bale. Such mixed-packing creates trouble for the spinner.

There is still another unfavorable effect from the lack of uniformity in staple length, that is, from the standpoint of variation between bales or from one crop year to another in the same locality. Setting the machinery and the organization in a spinning mill for a certain cotton or type of raw stock is a considerable task. Mills, therefore, attempt to keep their raw material as even running as possible. The ginner enters the picture here in the care he takes in not mixing planting seed at the gin. In view of the expense and trouble incident to changing machinery to handle different raw cottons, this problem is more important perhaps than many ginners realize. Furthermore, since the damage to staple uniformity caused by mixing of planting seed at the gin is not immediately apparent, it is a problem frequently overlooked by both the farmer and the ginner. A little broader view of the matter, however, will bring out the fact that a community with the reputation of producing uniform bales year after year will find a more ready market for its cotton crop than one which is not so reliable in this respect. The "One-Variety Community" program launched by Federal and State agencies in recent years is largely based upon this important fact.

Quality of Manufactured Goods: So far the discussion has been limited principally to the effects on initial and manufacturing costs of undesirable elements in lint cotton. In addition to the cost problem, poor ginning and its resultant poor quality of lint affect the quality of the manufactured goods considerably. It is sometimes difficult to separate these factors, since many or most of the elements which raise cost also lower quality. The same causes of unevenness, weakness, neppiness, etc., in the partially completed material at various stages of manufacture, are also responsible for defects in the final product, as these imperfections are carried along into the yarns and fabrics.

Trash and other imperfections that are not removed by the cleaning operations will eventually appear as dark specks, neps, or uneven places in the yarn and cloth. If the material undergoes the additional process of dyeing, these defective places may react to the dye differently from the bulk of the goods, resulting in spotty, streaky, or vari-shaded materials. Naturally, such a product has a considerably reduced market value from one of first quality. Properly ginned, clean raw cotton of fairly uniform staple length affords much less opportunity for such undesirable results than cotton that has been poorly ginned.

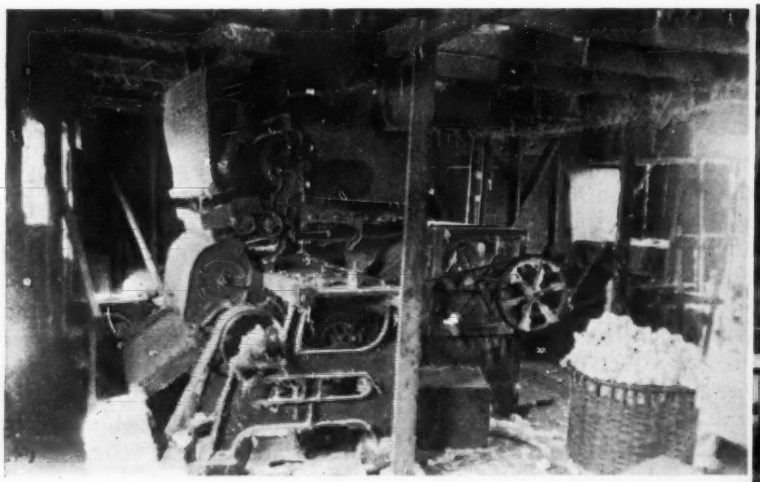
This matter of yarn appearance and evenness is of such importance in the trade that the United States Department of Agriculture has expended considerable research effort in developing standards or grades for yarn appearance which recently have been established. By comparing the appearance of yarn wound on small black boards with that of certain photographic standards, it is possible to give a definite grade or evaluation to a yarn, and so afford a relatively accurate description of the yarn with respect to its appearance.

Many of the same cotton quality factors that affect the appearance of finished goods also affect the strength and uniformity of strength of such manufactured products. There is, of course, nothing the ginner can do to increase the inherent strength of the cottons which come to him, but by proper drying when needed, and by adequate cleaning and smooth ginning, he can certainly retain to a large extent the fiber properties which will serve to produce strong yarn. An inherently weak-fibered cotton will produce a relatively weak yarn regardless of how carefully it is handled prior to ginning and spinning. However, it may be made considerably worse by improper handling.

Conversely, a strong-fibered cotton, if ginned properly will retain its good qualities, and enable the spinner to produce the optimum strength in his yarns and fabrics that is obtainable from that particular cotton. Poor ginning in such a case, however, may easily destroy to a large extent the inherent advantages of this cotton, with the result that the final product of the spinner's art perhaps would be no better than that produced from the weak cotton previously mentioned. Such poor ginning might even have the effect of destroying the original staple uniformity, causing unevenness in the strength of the yarn. In mechani-

THE IMPORTANCE of proper ginning and the damages done to cotton by improper ginning are well known to every mill cotton buyer and superintendent. How to educate the farmers and the ginners, to a better recognition of the need for better ginning is a difficult problem on which many agencies of the industry are working.

This article forcibly and accurately describes the effect of ginning upon the cost of the raw material, the cost of manufacturing yarns and fabrics, and the quality of the yarns and fabrics. It was originally written as a message to ginners; we reproduce it here in the hope that mill men will use its common-sense facts in "preaching the gospel" of better ginning in their individual communities. . . . . . .



Here is an object lesson in gins. The picture above, made by Charlie K. Cobb of Canton Cotton Mills, illustrates improper conditions found in so many gins throughout the South. The photo at the right (courtesy, U. S. Cotton Ginning Laboratories) shows a modern gin, including drying, cleaning, extracting, seed scales and pure seed handling equipment.

More gins like the one shown at the right, and less of the other type, will aid in preserving the natural qualities of cotton and in avoiding troubles now caused by ginning . . . . . .

cal fabrics especially, for example, it is the weak places in the yarns and thread which give trouble, the occasional occurrence of strong places being of little or no value.

Experiments conducted by the Department indicate that improper use of driers at excessively high temperatures may damage the strength and resiliency of the fibers by "baking". Such fibers are, of course, detrimental in the spinning because they decrease the strength and other qualities of the product. Driers should not, therefore, be operated at temperatures above those recommended.

Other tests involving gin saws of different finenesses, pitches and shapes, indicate that while somewhat closer ginning than is the general custom sometimes may be carried out without detriment to the sample, this can be carried to an extreme and cause harm to both the cotton and the spinner. In such cases, the additional short, unspinnable fiber ginned from the seed increases the amount of waste removed during the manufacturing process, and the increased presence of seed coat fragments serve as hindrances and sources of trouble to the spinner. The extra turnout gained by such practices, therefore, while bringing a slight increase in the weight of the bale, is more than offset by a loss in staple, since the classer will likely call such a bale wasty, and consequently penalize the staple length.

The Department has also conducted experiments on bale packaging involving the use of different kinds of ties and bagging. While some spinners have occasionally complained that sisal and jute fibers adhere to the cotton, causing trouble in the mill, this is probably more of a psychological problem than a real technical one, since such mixture of fibers can occur only on the surface of the bale, and in relatively minute quantities.

Studies have been made in "bale cutting", the term frequently given to those cuts or "blowouts" which sometimes occur in a bale during compressing. Spinning tests on such cut bales have indicated a perceptible but not important increase in spinning waste over the uncut bales. The manufacturing performance of the cut cotton and strength and appearance of the yarns were only slightly less satisfactory than those for cotton of the same quality not cut. The ginner's responsibility in this matter lies principally in avoiding the packaging of oversize and uneven bales, since such bales are more susceptible to cutting than are the standard sized ones.

It can be said too that on a basis of results obtained in the spinning laboratories of the Agricultural Marketing Service, even the most extensive use of modern complex cleaning and extracting equipment prior to ginning will not produce from roughly harvested seed cotton, ginned lint and spinning results of a quality comparable with that obtained from minimum cleaning equipment on carefully hand-picked seed cotton. In like manner, a commercial cotton spinner cannot take a poorly ginned sample of lint and manufacture from it a yarn or fabric of the highest quality regardless of how modern or elaborate his textile equipment may be.

Ed S. Kempton Forms Farm Implement Concern

Ed S. Kempton, of Gastonia, N. C., has organized the Ed S. Kempton Company, of Gastonia and Charlotte, N. C., to act as Carolinas distributor and local retail dealer for the J. I. Case Company, manufacturers of farm implements.

The Kempton Parts & Spring Company, Gastonia, established by Mr. Kempton in 1939 to serve textile mills, will continue under his ownership and management as in the past.

Cotton House

A model cotton house has been built and put on exhibition in Washington, D. C., under the sponsorship of the Department of Agriculture. Almost 700 pounds of cotton were used in the construction of the model, which is said to have a flame-proof fabric for the ceiling, inside and outside walls and new water-repellant fire resistant cotton insulation. The house is said to require only 62 hours of labor to erect and can be demounted and erected wherever desired.

The Trend to Wider Fabrics

By H. E. Wenrich

DURING the past few months, considerable interest has been aroused as to the feasibility of manufacturing wider cloth. If a manufacturer of woven fabrics should be holding back opinion on this vital subject, perhaps reference to the past, gathering statistics of the present, and looking into the future, may give the approach necessary to formulate some plan to keep in step with this trend towards a wider cloth width.

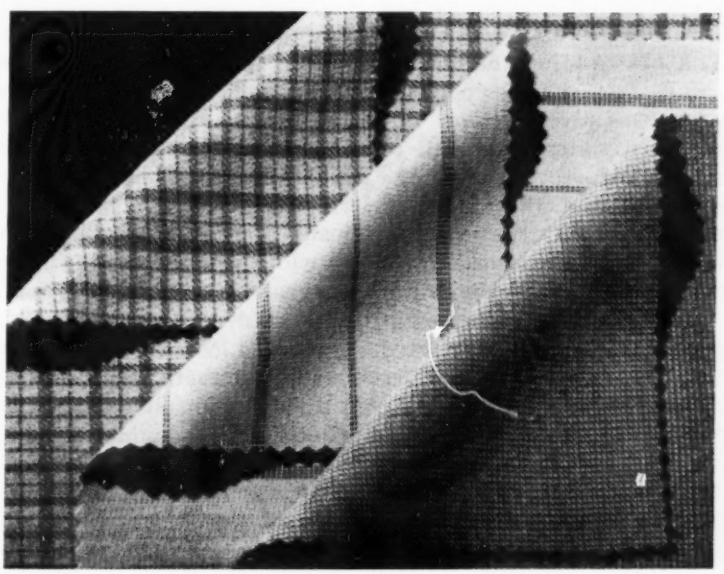
Weaving cost is not the only factor entering the picture; although weaving cost is considered the largest single item of per yard cost in the weaving plant. In the loom-preparatory department we have warping, sizing, quilling, and handling. Following the piece goods from the loom, we have piece-goods removal from the loom to the shipping department, picking, inspecting, packaging and shipping. These items are the major elements of cost comparison between the standard width and the wider width. Before going into these costs and other factors favoring the wider widths, reference to the past cycles of wide fabrics may prove interesting.

In the *good old days* no magician was necessary to keep a plant operating. Practically any type or make loom, from two or more, housed in some outshed, dungy building or other edifice with a roof and four walls, would be kept busy year in and year out on the same weave. Among some of these old looms were the French and German looms capable of turning out three widths of 27-inch cloth. Usually, the same weave shed having these wider looms were also equipped with a number of narrow-width looms of 27-inch cloth width. Comparing the speed between the narrow and wide looms would be like matching an elephant's heavy stride with that of a fleet cheetah's. But where the three-width loom—as well as the two-width—held the edge on the single-width, was in the preparatory departments.

Another interesting angle on width was due to the mushroom growth of the silk industry in its earlier stages. Nearly as many loom builders as weaving plants, were springing up around the textile centers, turning out all types of looms imaginable. Even after the introduction of the drop-box multiple loom and after World War 1, numerous bakers, butchers, and other would-be cloth manufacturers, had looms built to their order in their local foundries. And even as recently as eight years ago, the writer witnessed a plant junking several sections of self-built looms and installing modern high-speed, precision-built looms. The one odd quirk about these hastily built looms was the various odd widths they were built in.

During this sporadic period of loom building, mention must be made of the three loom-building companies that built their product on a more solid foundation. These three; two of which are outstanding textile machinery builders of today—Crompton & Knowles Loom Works and Draper Corporation—were turning out an excellent loom in practically any width desired. The third company—The Stafford Company—built one of the finest looms on the market just previous to their liquidation, in both narrow and wide widths. Of course it is common history that Crompton & Knowles and Draper Corporation took over different branches of the Stafford, so the many finer features of these looms have not been lost. However, the cruder product, hastily built, fell by the wayside.

Stafford loom widths usually were marked in such a manner that the loom width corresponded to the cloth width. Thus a 52-inch loom was capable of turning out a 52-inch, in-the-reed, fabric. The Crompton & Knowles marked their product so the loom width corresponded to the width between crank arms; thus a 52-inch loom would turn out a 48-inch cloth and with careful crowding, a 50-inch cloth could be handled on this width loom. In fact, during the rush period on a 49-inch cloth the writer knew of 50-inch loom mounted on this width. There is a trick really employed in weaving a wider cloth than the take-up



Top, a 2/2 twill made of acetate and viscose rayon staple blended and cross-dyed. Center, an all-acetate rayon staple fabric with yarn dyed stripe. Bottom, another acetate-viscose staple blend piece-dyed, twill weave. (Tennessee Eastman photo.)

drums and rollers can handle. If the take-up drum is 48 inches in width and a 49-inch cloth is being woven, one or both edges must be turned over from ¼ to 1 inch on each side in order to prevent the cloth edge to become soiled or torn as it passes down around the sand drum and various pressure rollers to the take-up roller.

In the past, 10-inch to 27-inch cloth was usually termed as narrow goods and woven on narrow looms; or two or more widths woven on a wide loom by using the doup. Cloth from 27-inch width upwards was woven on the wider looms and termed "broad goods". This practice of classifying cloth widths in the rayon weaving sheds today has generally been discarded, and any rayons under 52-inch are usually classified as narrow weaves and 54-inch rayons, and upwards, as wide widths. Thus when the term wider cloths is used, it refers to 54-inch cloth unless the width is specified at the time.

The question of wide cloth has cropped up in the past from time to time. Certain cutting-up houses favored certain widths and for this reason, the various width looms became standardized by the two large loom manufacturers in order to give their well-known product at the lowest possible cost. Many of these looms installations in the broad silk industry a number of years ago were intended primarily for the weaving of those famous cotton-back satins so much in demand at the time. The trend to narrower looms followed, and many looms were installed from 46-inch to 48-inch widths. Many of these same looms today are operating on 36-inch to 41-inch taffetas, twills, plain satins and poplins. The viscose rayon poplins of 100 denier seem to be quite a popular number in 40-inch width. Now, as the wider goods went out of the picture and the narrow goods came into spirited demand, many of these single-shuttle wide looms were cut down to the narrow width and changed over to multiple shuttle; generally the 2x1 box loom.

From actual experience, I do not believe renovating looms into a different width or type pays for the cost. In the long run, altering the original loom may prove far more costly than the purchase of a new loom. In making this change-over, principal mechanical changes involved are not adjusted to the fine precision necessary to keep the loom operating at high efficiency. Parts, even though fitted by the best mechanic in the plant, will not be placed on as perfectly as they should be, and in time these parts work loose, become broken, or wear through lack of proper adjustment. Considering the costs from production alone, a built-over loom cannot be speeded up to secure maximum production.

The best way to illustrate this is by citing some first-hand experiences along this line. In changing over some wide looms to a 45-inch width, numerous parts such as pressure rollers, rocker shaft, sand drum, crank shafts, and other such width-length loom parts were cut down to proportion at a local machine shop. The side stop motion was changed to the center-filling stop motion. New boxes on one side of the loom necessitated cutting one end of the lay off and fitting the box, lay sword, and box motion in place. I do not recall the exact figure for new parts from the loom builders, but the cost of box, lay sword, box motion and a few other necessary parts came in the neighborhood of $150.00 each loom. The cost of cutting down the take-up drum ran $15.00. The various other operations including shortening the breast beam, lay, etc., ran better than $100.00. Adding the cost of labor and the shut-down time, renovating was a costly item. But the most costly item was still to be figured with—even after the looms were altered, they failed to turn out the quality and production of factory-built looms.

This cycle of narrow fabrics ran along for approximately eight years, when the cloth started swinging into a slightly wider weave of several inches, requiring a wider loom of 48-inch to 52-inch loom widths. Along about this time, the 72-inch loom made its appearance for the weaving of two or more shuttles in a wide crepe. This call lasted but a short time, and many Crompton & Knowles and Stafford 72's became a drug on the market. Many of these fine looms, uncrated, sold for $250.00 each in the second hand trade. These looms were cut down to 48-inch and 52-inch.

During this process of shifting from one width to another, one of the largest piece-goods manufacturers in the East kept stepping looms up to a wider width in order to weave the extra wide cloth in two-width operation. Thus an 88-inch loom weaving two widths of 41-inch cloth was stepped up to a 92-inch loom weaving two widths of 43-inch cloth. The same loom was later stepped up to 94-inch widths, then to 96-inch widths, and at the time of this writing, the few remaining looms this once-famous company operates, are at the 104-inch width. The reason for this company's failure to hold onto their numerous weaving plants can be traced to the wasteful practice of the management. If looms would have been purchased six or more inches wider than fabric demands called for at the time, a few million dollars could have been turned to better advantages.

Another cycle of wider goods cropped along during the introduction of the "grainy weaves". These weaves call for a 4x4, 6x6, 8x8, etc., 4x8, 8x16, etc., the one set of filling yarns being S twist, and the other set being Z twist. When these weaves were first tried out, many constructions were woven 54 inches in the grey and as weaves were sampled in various counts, they gradually slipped down to approximately 49-inch widths with a few touching as low as 47 inches in the reed. During the first call of these 54-inch weaves, a 56-inch loom was to be had only at a premium. The fabric was attractively priced, and many of the looms over 72 inches in width were pressed into use for the weaving of this cloth. So a spirited demand was on once more for wider looms.

Due to several reasons, the cutting-up trade failed to see the possibilities in the wider fabrics, and many refused to install the simple changes necessary to take advantage of the wider widths. Therefore, it was not practicable to change-over the weave shed to fill a demand that wasn't promising for a long run. This mistaken

idea left many weave sheds high and dry as they were unable to fill any part of the season's demands. And in a short time, many of the narrower looms were in operation once more on the cloth widths under 48 inches. So it seemed as if a promising means of lowering costs had been lost in the shuffle. But time proved that the wider cloth was gradually creeping into one corner after another, and today, if the weave shed is unable to handle the width in demand—instantly—that plant is fast becoming obsolete.

During the process of weeding out obsolete looms and sudden spurts of short-lived cloth widths, a few manufacturers were able to hold onto their wider looms from 64-inch to 72-inch widths; proving after experimenting with various widths and seasonal demands, that one width in particular could be woven through high peaks as well as low peaks during these width cycles. This weave that seemed to absorb sudden changes in styling, is the 61-inch to 64-inch widths that a number of well-known houses specialize in. Some of these wide widths are Bemberg filled; others are in acetate as well as in spun rayon yarns. There must be a reason for the steady demand of these widths from a few of the better-known brokerage firms.

One such reason was stated by a well-known figure in the textile industry—his firm was located on Madison Avenue, New York City. "Mr. G——," the question was put to him, "your interest is centered on the 62-inch cloth. What seems to be the advantages?"

"It is the only width I find will give us a better garment at the least possible cost. The majority of our garments are cut on the bias and the narrower cloth cannot be handled satisfactory," was the enlightening answer. And there certainly seemed to be something to it, for this one firm kept better than a thousand looms operating on their favorite article.

Present Demands

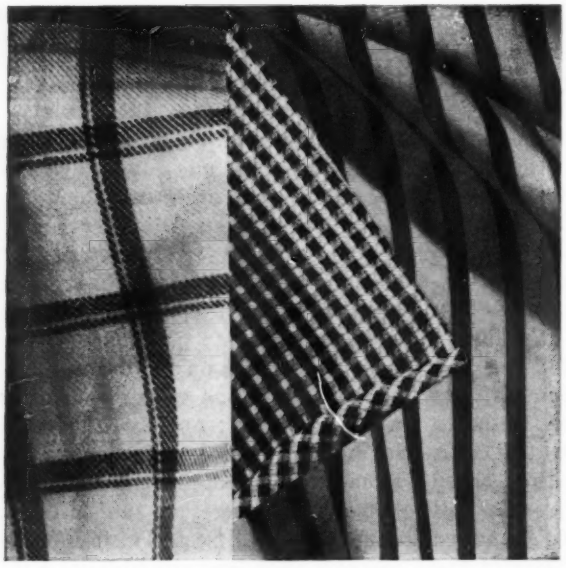
On standard width looms, today's demands call for widths better than 36 inches. Many weaves are constructed around the 40-inch widths, but if a loom is not capable of turning out a 54-inch width cloth, it has a slim chance to be kept in operation the greater part of a full year's activity. A weave shed, in order to be kept in operation, must have looms that will take the various widths; or the majority of these widths, on a quick change-over.

It is impossible to make any attempt at compilation of cloth widths over a period of years—even for one year—for no one knows what a new yarn will be forced to go through until it meets its ultimate groove. But it is a safe thing to assume, that these yarns, after a few samplings, will narrow down into the standard widths temporarily. A few of the rayon favorites that have become proven weaves, whose demand justifies continued manufacturing for several years to come, are shown in the accompanying list.

This list is but a fraction of the hundreds of cloth widths and constructions being turned out at the present time. It contains but one or two in a few of the popular weaves and does not include piques, rashas voiles, sharkskins, sheers, romaines, georgettes, failles, and other equally favorite weave constructions being woven today. But including these weaves—in fact, include every weave construction coming off the loom today, and the startling truth will be disclosed that the majority of these weaves are being woven in widths too wide for the average cotton loom.

A close check on the weaves listed will show one weave requiring a 66-inch loom; one for a 54-inch loom; three weaves for a 52-inch loom—and it could be handled to better advantage on the 54-inch; one weave calling for a 48-inch or 50-inch loom, and the balance handled on looms of 46-inch width and under. Statistics of all other cloth widths will show the same result. Consider the problem presented here and it will prove that with the 38-inch, 40-inch, 44-inch, and even with the 45-inch loom, weavers on these widths have small chance to compete with other manufacturers having 58-inch looms at their command. Widespread

Canton Crepes:			
43 inch width	96x48	150 den. warp	150 den. S and Z
48 inch width	120x52	100 den. warp	150 den. S and Z
Flat Crepes:			
42 inch width	80x40	150 den. warp	100 den. S and Z
46 inch width	112x68	100 den. warp	100 den. S and Z
French Crepes:			
42 inch width	92x64	150 den. warp	100 den. tw.
45 inch width	150x92	75 den. warp	75 den. tw.
Rough Crepes:			
48 inch width	96x44	150 den. warp	150 den. crepe
52 inch width	120x56	100 den. warp	150 den. crepe
Alpacas:			
48 inch width	44x38	150 den. acetate	150 den. ace-tw.
		100 den. viscose	150 den. vis-crepe
Alpacas, plain:			
35 inch width	64x60	50s combed	150 den. viscose
Twills:			
38 inch width	96x84	150 den. viscose	44s combed
43 inch width	160x72	150 den. acetate	150 den. acet.
Satins:			
63 inch width	50/5/2	20/22 silk	100 den. Bem.
40 inch width	104x54	150 den. viscose	30/1 combed
42 inch width	288x84	100 den. acetate	100 den. acetate



Left, spun viscose fiber and abraded acetate fiber yarn spun into a plaid. Center, viscose and acetate continuous filament cross-dyed checked fabric. Right, a woven striped fabric of spun viscose staple and abraded acetate yarn. (American Viscose Corp. photo.)

evidence shows substantial demands for wider cloth has at last become an actuality.

There used to be an old cry about lost space when wide looms were mounted with narrow fabrics. To a certain extent this cry was justified, as it is natural to expect that the lost width will make itself felt. Inherent in every good production manager, weave-room foreman, and even loomfixer, is a distaste for the unsightly extra width on the production end going to waste. But if an organization can keep their looms active, it is far better than seeing an entire weave room shut down due to the inability to take on a wider cloth. You can always weave a narrow cloth on a wide loom, but cannot turn out a wide cloth on a narrow loom (an exception to this statement is the weaving of stage curtains of extra wide widths—a 104-inch loom can be utilized to weave a curtain 200 inches in width.)

Other savings that may be brought about by weaving wide cloth are primarily through the preparatory department. It will take just as long to beam a wide warp as a narrow warp, but slightly longer to fill creels and warp the ends onto the machine. However, the handling time in all operations are lowered accordingly. If two warps of 60-inch width are going through the mill in place of three warps of 40-inch width, the material handling is cut nearly a full 40-inch width. Truckers and sizers handle two beams against three; twisters handle two warps in mounting against three although their end-twisting time requires the same for the two wide jobs as for the three narrow jobs. The floor hands handle two against three remounts; the quillers and bobbin changers have less work accordingly; the piece-goods remover handles two against three; pickers, inspectors, and shippers likewise handles two against three. On fixing however, the loomage is generally cut slightly, but on yardage basis, the load is increased. The weaver load is decreased also per loomage, but on the yardage basis, the load is increased. A weaver handling 24 narrow looms can safely handle 20 wide looms. If the weaver load is 40 narrow looms, it can be assumed that the load will average 32 wide looms.

Another disadvantage of the narrow looms is the limited types of weaves the looms can handle. Unable to handle but a one-shuttle job, many of these looms are fast becoming obsolete. Many weaves, although constructed of but one type of filling yarn, can be woven with a far greater number of "firsts" if woven on a multiple-shuttle loom. As a great deal of filling has a certain amount of defects, two or more shuttles operating on the same twist or pigment rayons will give a more thoroughly mixed yarn and often eliminate streaky cloth. Of course, the main object of the box loom is the weaving of two or more different types of filling yarns; such as S and Z twist in crepes; acetate and viscose or other rayon, cotton, silk and other fibers for cross dyes; thick and thin combinations, and other filling yarns where cloth constructions require the mixing of two or more colors or yarns to be laid into the weave pick and pick or of one or more threads alternating.

Predicting the Future

From past performance in the textile industry, it does not seem a wise turn to try to predict the future possibilities of wide cloth. However, the signs can be interpreted as a hustling period of activity in the weaving industry during the few years ahead. There is a heavy demand for experienced hands in all branches of the machinery trade, and this demand will be increased with the result that many textile plants will suffer the loss of many of their most capable help. In order to overcome a shortage on experienced workers and as well as to keep costs down to a minimum, wider cloth will logically follow these trends.

And once the wider fabrics are fully in swing this time, the cycle, on reaching its stride, will not return to the narrow cloth as in former cycles. For during the past upheaval, those manufacturers who have held on have learned that to stay in business there is no standing still or going backwards —and the wider cloth will eventually become the standard weave. Economical reasons alone in the weave shed, as well as in the cutting-up trade, will keep the wide cloth to the forefront.

An interesting booklet along these same lines has recently been mailed to the trade by Crompton & Knowles Loom Works. This booklet lists "3 vexing ills of textile mills." Of these 3 complaints, the one that hits the truth regarding cloth widths with the most force, follows:

"Faulty Assimilation: Looms that can't be adapted to take care of today's requirements in yarns, constructions, widths . . . such looms narrow the activity of merchandisers and starve out your profits completely."

Let us add to this quoted sentence—not only starve out your profits completely, but consume up your capital as well.

Power Conservation Plan Forces Curtailment of Southern Mills

Shortage of power for unprecedented demand and defense plants makes necessary shift of mill operations to include week-end

TEXTILE MILLS, along with all other industrial plants in a widespread section of the Southeast, went under a curtailment program, beginning June 16, as a direct result of a shortage of power in the district. The plants affected by the program are those on the lines of the Georgia Power Company, the Alabama Power Company, the Mississippi Power Company, the Gulf Power Company, and the South Carolina Power Company. The area affected may be generally described as Georgia, Middle and South Alabama, Mississippi, and the Horse Creek Valley of South Carolina.

The reasons for the power shortage and the consequent necessity of power conservation, were threefold: First, and primarily, an unprecedented drouth has lowered the water reservoirs at the hydro-electric plants of the companies involved to a critical stage, and no extraordinary rainfall may logically be contemplated during the summer months. Second, the extreme demand that has been placed upon these power supplies by the unusual commercial and industrial demands due to the increased business activity of recent months. (A fair estimate of mill activity in Georgia during April and June would be that practically every plant operated at least 120 hours weekly). Third, the utter necessity of furnishing power to aluminum and other industries, located in the area, that are so vital to defense.

Since the power suppliers in the area affected rely largely upon hydro-electric plants for the generation of current, it became apparent in May that some drastic action to conserve power supply was essential. Charles A. Collier, vice-president of the Georgia Power Company, explained the critical situation to the Cotton Manufacturers Association of Georgia at its convention in Sea Island May 29-30, and that organization took prompt action in approving a resolution to accept, mandatory from the power supplier, a reduction of 33 1/3 per cent in power consumed by each mill, the reduction to apply to the plant's power consumption during the four-weeks period covered by the June 1 billings in each case. The curtailment now in effect applies to the plant's operations between the hours of 6:00 A. M. on Monday, and 12:00 noon on Saturday. It was made clear that, between Saturday noon and Monday at 6:00 A. M., there should be ample power available, and during this week-end period, the plant may secure all of the power it desires, subject to availability.

Sunday Operation Prevalent

At this writing, it is too early to record the general program of operation by the mills in the affected area, but indications are that there will be a rather general adoption of mill operation on Saturday afternoon, and through Sunday, to recover as much of the lost time as possible. A specific illustration would be that if a mill had been operating full-time between Monday morning and Saturday noon, it could, by Saturday-Sunday operation, recover substantially all of the enforced curtailment during the week.

Naturally, with business activity and textile consumption at the present high rate—with many specific instances of need for textile products in connection with National Defense—there was no relish in accepting the curtailment among the mill managements affected, but it is the result of an inevitable and unprecedented condition of Nature and other forces that could not have been foreseen.

The program affects all industry in the area alike. There are some with scruples against Sunday operation who may accept the curtailment of power during the week without attempting to recover a part of it by week-end operation on this or some other basis, in which cases there will be a net decrease in production to the extent of the power curtailment in those plants dependent upon the power companies for their power. Generally, though, week-end operation is anticipated.

A staggered program or schedule of operation, certainly by the large power users or by large power-consuming districts, will be essential to the leveling out of demands on the power companies' facilities throughout the Monday-Saturday period. This may mean, in an individual case, more night operation than day operation, and other adjustment and inconvenience to conform to the general leveling out during the week.

It is now anticipated, however, that if the industries throughout the district will conform to a staggered program as developed by the power companies when they have studied the demand periods, it will be possible, through the operation of steam power plants, and river-flow facilities, to distribute the load over the full seven-day week, so as to supply the former five-and-a-half day power requirements, without the necessity of lowering the levels in the water reservoirs at the hydro-electric stations. Already, as pointed out, the water supply at these points is at the critical stage, and power officials feel that nothing must be permitted that will further threaten this supply.

Indications at press time are that the emergency situation, at least in the areas originally affected, will be of long duration, and may extend well into the summer and possibly into fall.

Preventing Strip-Outs in Printing

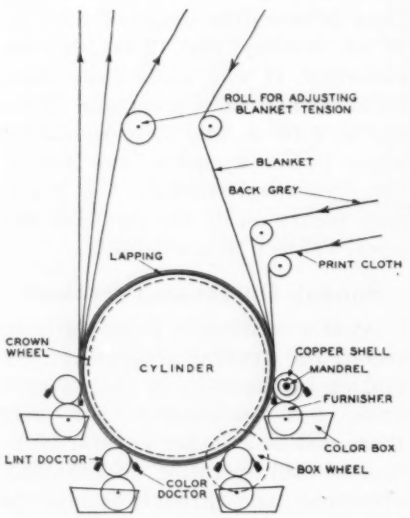
IN THE PRINTING of shirtings or other types of fabrics that are to take fine lines, running warp-wise of the cloth, the printer quite often encounters trouble from strip-outs. Strip-out is the term applied to the absence of color in part of a warp-wise line, and is usually caused by foreign particles, such as small pieces of lint, lodging in one of the lines of the engraving and being dragged down the line by the doctor or cleaning blade. There are a number of other causes of strip-outs and they will be taken up in order, and methods of eliminating them will be given.

Foreign particles cause the majority of strip-outs. A number of things may be done to wholly or partly eliminate strip-outs from this source. One of the best and surest methods of eliminating this trouble is to form an engraved line with a series of dots instead of the conventional straight line with its V-shaped ground. The engraver allows for enough color flooding from these dots so that on contact with the cloth the color spreads and forms a perfect line. When a foreign particle lodges under the doctor blade it will lodge in one of these dots and be impressed on the cloth instead of being dragged down the engraving as would be the case with an engraved line having conventional V-shaped grounds.

Setting the Doctor Blade

When using the conventional line with V-shaped grounds, it has been found that putting a slight slash on the doctor blade, setting the blade at an angle with the roller, will help eliminate strip-outs as this will cause the doctor blade to cross the engraved lines at an angle and this tends to cause any foreign particles lodged under the doctor blade to jump across the lines instead of being dragged down them and consequently stripping out the color. On patterns with widely spaced lines it has been found that a long stroke on the doctor blade will give good results, while on patterns with lines close together, it has been found that a short stroke on the doctor blade will give good results.

The use of a lint-doctor blade with a piece of heavy cloth, such as wool lapping, between the blade and the printing roller has been found to be helpful but gives only momentary relief as the foreign particles soon collect under this blade and begin to find their way into the color pan. The use of a furnisher brush in place of the conventional wooden furnisher roller is found to be helpful in some cases but these brushes



usually, after a short run, become filled with lint, strings, and other foreign particles and have to be taken out and cleaned.

The use of a plain gum-roller ahead of the printing roller is also found to be very helpful. A very sticky gum is used on this roller and this causes a large majority of lint and other foreign matter to adhere to this gum-roller and to be scraped off into the color pan under the gum-roller by the doctor blade working on this gum-roller.

Goods Treated Before Printing

All cloth to be printed on this type of pattern should be well brushed before printing to remove loose lint and trash. It has also been found that running the goods through a water mangle, after brushing, gives very good results where "dead-cotton" is found on the face of the goods. Dead-cotton is quite often found on the surface of inferior grades of print cloth and appears as small, soft, fuzzy lumps. As the cloth passes through the printing machine these particles of dead-cotton become disengaged from the surface of the print goods and adhere to the printing rollers, are scraped off the printing rollers by the doctor blades and are then deposited in the color pan, under the printing roller, and work their way under the doctor blade and cause strip-outs in a manner similar to those caused by loose lint or other foreign matter. The previously mentioned water-mangle treatment presses this dead-cotton into the weave of the print goods and thus prevents its adherence to the printing roller.

It is sometimes found that increasing the adhesiveness of a printing color will help to eliminate strip-outs. If the color is too watery and lacks a good sticky body, a small amount of dry British gum may be worked into it, by hand, and will in many cases give very good results. The use of a small amount of Gum Arabic or Gum Senegal is often found helpful but will be found to increase the color cost considerably.

The color-mixer can assist the printer in a number of other ways to prevent strip-outs, among which are: the use of a thickening agent suitable to the printing of fine lines, namely, a printing gum with a high percentage of solubility; straining the color through a fine mesh cloth which removes small color or paste lumps and foreign particles; and by adding to the color a high-quality combination lubricant and solvent.

There are other ways of coping with the problem of strip-outs, but the foregoing methods have been found to give very satisfactory results and to eliminate the trouble in the majority of cases.

S. T. A. Myrtle Beach Meeting

THE 33RD ANNUAL convention of the Southern Textile Association was held at the Ocean Forest Hotel, Myrtle Beach, S. C., June 12-14. From an attendance standpoint it was by far the largest in recent years. The program was well-planned and speakers presented instructive information for those attending the business sessions. Delegates to the convention included mill men and their wives, and associate members of the STA, salesmen and service men of companies allied with the textile industry.

The convention opened on Thursday, June 12, with the associate member's banquet, with mill men and their wives as guests, and consisted of two business sessions, one each on Friday and Saturday mornings and a STA banquet Friday night. Friday afternoon was given over to golf, set-back, horseshoe-pitching, swimming, etc.

Speakers for the business sessions were Frank D. Lockman, Monarch Mills, Lockhart, S. C., president of the association; E. A. Terrell, president of Terrell Machine Company of Charlotte; Hon. Burnet R. Maybank, Governor of South Carolina; Edward Scheidt of the Federal Bureau of Investigation; and Malcolm E. Campbell, senior cotton technologist of the Department of Agriculture.

Thomas New STA President

J. O. Thomas of Marshall Field & Company, Spray, N. C., was elevated from vice-president to president of the association, succeeding Frank D. Lockman. Other officers elected were Robert T. Stutts, Woodside Cotton Mills Co., Simpsonville, S. C., vice-president; Marshall Dilling, A. M. Smyre Mfg. Co., Ranlo, N. C., executive secretary; and T. C. Pegram, Erwin Cotton Mills Co., Cooleemee, N. C., chairman of the board of governors. Mr. Pegram formerly was a member of the board of governors and Weldon Rogers of Chadwick-Hoskins Company, Charlotte, N. C., was elected for a one-year term to fill the unexpired term of Mr. Pegram. Other members elected to the board of governors were E. W. Seigler, Grendel Mills, Greenwood, S. C.; B. M. Bowen, Salisbury (N. C.) Cotton Mills; S. H. Holder, Consolidated Textile Co., Lynchburg, Va.; and Virgil E. McDowell, Rosemary Mfg. Co., Roanoke Rapids, N. C.

Mill Tests to Be Conducted

At the meeting it was announced that The Textile Foundation has granted a sum of $5,000 yearly, to be made available for at least a period of five years, to the Southern Textile Association to be used in conducting practical mill tests in the plants of the United

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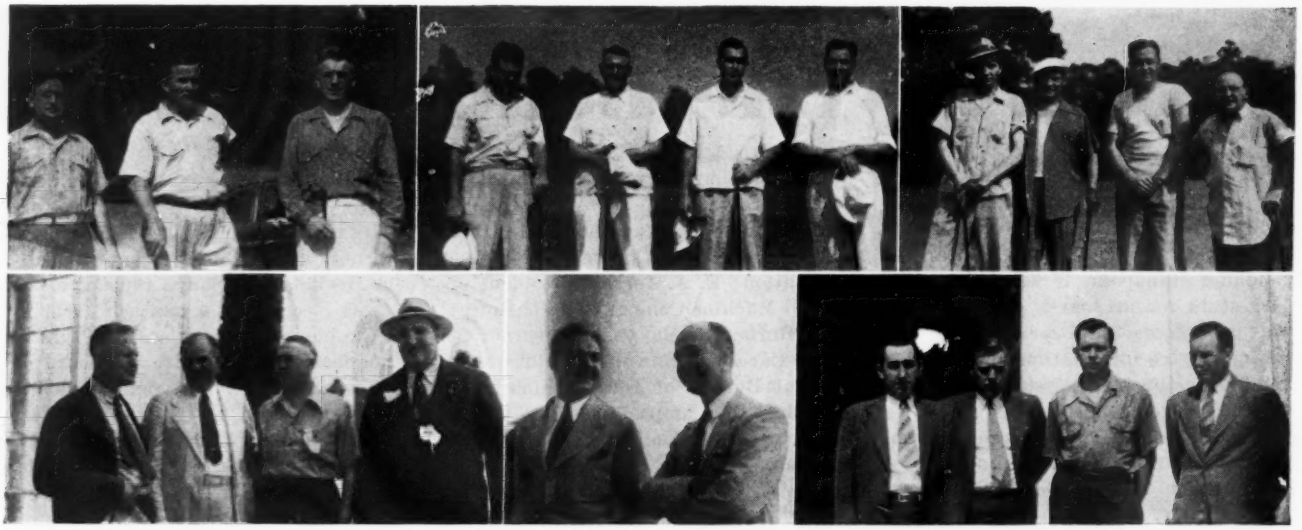
Report and snapshots by John C. Fonville of "Cotton".

Some of those attending the Myrtle Beach convention of the STA, top row reading left to right, **Miss Leona Smith** of Victor Ring Traveler Co. watches **Trenck Brumley** of Gastonia and **Therman Richie** of Victor inspect a sack of green apples while Mrs. Richie grimaces. **T. C. Pegram** of Erwin, chairman of STA board of governors, **J. Oscar Thomas** of Marshall Field & Co., **Blair Parks, Jr.**, of Erwin, **Mrs. W. H. Miley** and **Mrs. Parks.** On the beach **Hank Mitchell** of Staley rests under a pay-as-you-go umbrella while **Mrs. Smylie Taylor** (Staley) and **Dallas Neese** of Odell Mill Supply take a sun bath.

Second row, **E. L. Cantrell** of Springs Cotton Mills chatting with **Davis Batson** of Southern Shuttles and **Billy Klein** of Stein-Hall. **Cantey Alexander** of Corn Products, **J. O. Corn,** and **D. A. Purcell** of Marshall Field. Sitting, **Guy Morrison** of Penick & Ford, **J. W. Mitchell** of J. E. Rhoads, **Rip Wear** of Penick & Ford and **Walter Greer** of Frank G. North.

Third row, on the beach, **Walter Coker** of Armstrong Cork, **Frank Hunt** of H & B and **Ed Connor** of Foster Machine Co. Standing, **D. M. Culp** and **F. E. Bozeman** of Whitin, **W. C. Taylor** of N. Y. & N. J. Lubricant Co., **E. A. Terrell** of Terrell Machine Co., and **T. W. Mullen,** Rosemary Mfg. Co.



There is always time for golf at an STA convention. On the course, left to right, **J. B. Cornwell** of Republic Cotton Mills, **Jim Henderson** of Parks-Cramer and **W. W. Griffin** of Southern Franklin Process Co. **Lee Ramey** of Riverdale Mills, Enoree, **C. L. Chandler** of Jackson Mills, Wellford, **Marchant Cottingham** of Inman Mills and **C. L. Jolly** of Jackson Mills. **Carson Simms** of Whitin, **M. K. Firesheets** of Montgomery and Crawford, **Jim Garner** of Southern Franklin Process and **Jack Baker** of W. T. Lane.

Second row, **W. D. Anderson, E. H. Gregg** and **W. L. Rankin** of Carter Traveler and **Wes Hunt** of Carter Mills. **Malcolm E. Campbell** of Department of Agriculture, the Saturday morning speaker, chatting with **Bob Stutts** of Woodside Cotton Mills. **Frank Felder** and **Alex Garner** of Montgomery & Crawford, **Jim Bonner** of Sonoco and **Ross Brock** of Whitinsville Spinning Ring Co.

States. A man has been secured to supervise the tests, with the tests actually being run by the mills, and the supervisor is to prepare a detailed report of all tests and make them available to the textile industry. This work is to be in charge of the Southern Textile Association, The Textile Foundation and The Arkwrights, the research division of the STA, of which T. W. Mullen of Rosemary Mfg. Co., is president.

The persons in the individual mills making the tests will be given membership in The Arkwrights. The association and The Arkwrights appointed the following committee to supervise the work of the research man: T. W. Mullen, P. B. Parks, Jr., of Erwin (N. C.) Cotton Mills Co., and R. T. Stutts. It is understood that this test work will get underway as soon as possible. Professor George H. Dunlap of Clemson College will head up this work, being granted a one-year leave of absence.

Mr. Lockman, president of the association, in his address paid tribute to those men that assisted in the affairs of the association while he held term of office, and to the manner in which the association is run, on a "four-square" basis. He said that as a whole the sectional meetings have been well attended during the past year. Mr. Lockman forecast a shortage of labor for the ensuing months and said that the mills will be called on to make sacrifices, but "had no fear that this industry will not be willing to make the sacrifices required". He reviewed conditions during World War I days and pointed out that we are approaching similar conditions now, and advised that the mills and the personnel "be loyal and do everything we can to help our defense and each other".

Training of Men

E. A. Terrell, president of Terrell Machine Company of Charlotte, spoke on the training of men for his machine shop, a subject of much interest to the members of the association as evidenced by the questions asked the speaker at the close of his address. An abstract of Mr. Terrell's address follows:

"You know that the lowest paid employee is not usually the one who produces at lowest cost and that, conversely, it is the better trained, higher paid employee, who forms the backbone of your organization * * * . This tremendous production program calls for an unprecedented amount of training of men. Most of you have your own shops for maintenance and repair and you can train some of the additional machinists so badly needed in the defense and allied industries. I urge you to do this in the interest of the nation and in your own interests as well, for you are going to lose some of your machinists when the defense program gets rolling. Moreover, there are comparatively few shops in the South, outside your industry, where men can be trained. * * *

"We studied the apprentice systems of several large shops and decided that the most effective method of training all-round first class men would be to equip a separate shop under a separate foreman selected for his interest in training, his general mechanical ability, and his attention to cleanliness and order.

"The apprentice shop was opened in March 1940 with five boys and the number was later increased to eight boys which is all we can accommodate without crowding. We now have 13 apprentices, five of whom are operating machine tools in our main shop, and eight are employed in the apprentice shop. All have at least a high school education. Ages range from 16 to 21. * * *

"We found the I.C.S. had exactly what we needed in its Machinist Apprentice Course which we promptly adopted. This course was later offered to employees of the main shop who wished to improve their skill and a course for woodworkers was offered to a selected group in our spool and bobbin plant. * * * The company pays one-half the cost of the I.C.S. course, the employee the other half plus the cost of necessary supplies and equipment. Apprentices are required to buy a standard kit of tools and tool box. They are advised not to buy extra tools without consulting the foreman. Small weekly deductions are made to cover payment for course and tools.

"We start our apprentices at 30 cents an hour and increase them every six

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J. O. THOMAS, personnel manager for Marshall Field & Company, with headquarters at Spray, N. C., is the new president of the Southern Textile Association. He has been with Marshall Field since 1919 when he was discharged from the army after serving in France and England during the first World War. The Northern North Carolina-

Mr. Thomas

Virginia division of STA was organized in 1932 and he has been its secretary ever since. He served successively on the board of governors, as its chairman and as vice-president of STA. He is a director of vocational education for Leaksville public schools, vice-commander of Department of N. C. American Legion, and is now actively interested in Boy Scout work.

TOURNAMENT WINNERS

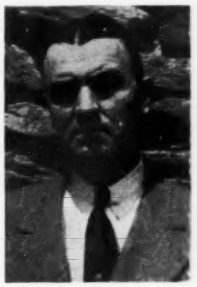
THE annual golf tournament was held Friday afternoon during the STA convention at Myrtle Beach. Winners in the active members (mill men) division were J. O. Lindsay of Pacific Mills, low gross; F. Gordon Cobb, "Cotton", 2nd low gross; M. Weldon Rogers, Chadwick-Hoskins Co., low net; and Newton G. Hardie, Gossett Mills, 2nd low net. In the salesmen's tournament low gross was taken by Ed Reid of Sonoco and 2nd low gross by Fred Sails of Atwood Machine Co. Jim Henderson of Parks-Cramer Co. took low net with F. E. Bozeman of Whitin Machine Works winning 2nd low net. Tommy Nelson of Penick & Ford, Ltd., walked off with the high score prize.

Ladies at the convention didn't give the men a chance in the set-back tournament, prizes being won by Mrs. Jack Greer of Greenville and Mrs. Fred Dickinson of Rockingham.

Virgil E. McDowell of Rosemary Manufacturing Company was in charge of the horseshoe-pitching tournament, conducted it in fine style, and finally won it.

ASSOCIATE MEMBERS' MEETING

THE Associate Members Division of the Southern Textile Association held its annual banquet and floor show Thursday evening, preceding the opening of the STA convention on Friday. Mill men and their wives were guests for the occasion. An excellent floor show out of New York enter-



Mr. Thomason

Mr. Turner

tained the crowd and following there was dancing on the patio. Ernest J. Eaddy, chairman of the Associate Members, served as toastmaster for the occasion. David Clark of Charlotte presented each past chairman with a silver cup.

In the election of officers, John C. Turner of Atlanta, Ga., was elected chairman to succeed Mr. Eaddy and Falls L. Thomason of Charlotte, was elected vice-chairman for the ensuing year.

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months according to progress made. Our contract calls for specific rates of increase but we have regarded those rates as a minimum and, in most cases, are paying more than the contract provided. Several boys have advanced so rapidly that we are paying them as much [at end of 8 months] as we had agreed to pay at the end of two years training.

"Upon recommendation of the I.C.S. field agent we placed a supervisor in charge of this work. He assists those who need help, sees that lessons are in proper form and mails them to the school for grading, etc. * * * We allow 5 hours with pay for study periods in the apprentice shop with an agreement that the apprentices will devote a like amount of time as a minimum to home study. Three hours are devoted to I.C.S. subjects and two hours to practical shop methods. A library is also provided.

"Does it pay? We think the apprentice shop is already on a self-supporting basis. The apprentice boys are doing better work than many poorly trained machinists who have had years of experience.

"The course includes industrial economics which gives the students an understanding of industrial organization, its functions, and its obligations to society. We believe a knowledge of fundamental economics will help to promote and to maintain better relations between employer and employee."

After his address Mr. Terrell was questioned from the floor and the following points were brought out. The training school does wonders to improve the spirit and morale of the organization. It requires 2½ years to complete the course that his shop has instituted, and when brought up before his organization, only a very few opposed the idea.

Hon. Burnet R. Maybank, Governor of South Carolina, spoke before the association, and though his address was not strictly textile, he was given a rousing ovation when he put in appearance because the mill men of South Carolina feel that this is one man that is "on their side".

Edward Scheidt, special agent in charge of the Federal Bureau of Investigation in North Carolina and western South Carolina presented an interesting address in which he told of the work of the Bureau in combatting sabotage.

Spinning Tests Results

Malcolm E. Campbell, senior cotton technologists, Department of Agriculture, Washington, D. C., covered a number of spinning tests results that are of interest to cotton manufacturers. He did not attempt to go into detail on any of the tests made by the Agricultural Marketing Service, but simply gave the results of the tests so that interested mill men might write for additional information if they so desire. An abstract of Mr. Campbell's address follows:

General. During the past two or three years the efforts of the government spinning laboratories have been directed largely toward examinations of different varieties of cotton from the quality point of view. Several hundred samples of cotton (different varieties and different sections) have been subjected to careful spinning and fiber studies. Results of tests are being made available.

Irrigated vs. Rain-Grown Cotton. Irrigated cotton [tested] was more wasty in 1 1/16-inch and 1 3/32-inch, but in 1⅛-inch Delta samples gave up more picker and card waste. California and Delta yarns were near enough alike in strength not to make much difference to spinner, but Arizona-New Mexico-Texas were 5 per cent weaker than those of the other two growths. Yarns spun from irrigated cotton definitely of poorer appearance than rain-grown cotton. Irrigated yarns contained more neps and were slightly more uneven. Irrigated cotton fabrics take dye evenly, but absorption of irrigated and rain-grown cotton fabrics so different that trouble would result if the yarns of the two growths were mixed. Irrigated cotton no harder to spin than rain-grown cotton.

Drying Cotton Before Ginning. Temperatures above 200 degrees F. definitely result in weaker yarns. When dried at not more than 160 degrees F. grade of cotton is improved without any appreciable loss in strength of yarns. Sun drying of cotton harmful to utility, giving increases in waste, and decreases in yarn strength.

Compression of Bales to Different Densities. Analysis of results with respect to waste, yarn strength, yarn appearance and general manufacturing performance revealed only slight differences among the different samples. Additional tests must be made before findings can be declared final.

Cutting of Bales During Compression. "Air-cuts" are caused by shearing action during compression of two adjacent portions of the bale which differ in density. Air-cut cotton yields more waste and manufacturing fly, high end breakage during spinning, weaker yarn.

This group of salesmen have completely hemmed in Arthur Jarrett of Highland Park Mfg. Co. Left to right they are **Castile** of Keever, **Williams** of Sonoco, **Lockman** of Dary Ring Traveler, **Goller** of Clinton, **Greer** of Frank G. North, **Jarrett** of Highland Park Mfg. Co., **Decker** of Textile Specialty Co., **Phillips** and **Thomason** of N. Y. & N. J. Lubricant and **Alexander** of Corn Products.

37½-Cent Minimum for Textiles Effective June 30; Further Hearings Planned on Wage-Deductions

ANNOUNCEMENT was made on June 8 that the recommended minimum wage of 37½ cents per hour for employees in the textile industry would become effective on June 30. General Philip B. Fleming, administrator of the wage-hour division of the Department of Labor, thus announced that he was approving the unanimous recommendation of Industry Committee No. 25, in April, and issued a wage order declaring the new minimum effective as of Monday, June 30.

This order increases the minimum wage for employees in the plants operating under the division's definition of textile industry from 32½ cents, which has prevailed since it was established by former Administrator Elmer F. Andrews, following hearings in 1939.

The practical effect of the increased minimum wage is difficult to calculate at this writing. It is recognized that even prior to the hearings on the matter of the minimum wage in April, there had been general wage increases throughout the industry which in most instances brought the minimum being paid near to if not equal to the new legal minimum. Furthermore, there is only a small percentage of the labor force of practically every mill that will be directly affected by the required increase to the 37½-cent minimum, though there will in many cases be adjustments above the minimum to varying degrees in different plants.

As reported in the June issue of COTTON, there was a spectacular development in the required public hearings on the recommended minimum on May 15-16, because the administrator had surprised the industry by announcing that evidence as to eliminating or regulating wage-deductions as a part of the minimum wage order would be received. For a full report of what happened at those hearings, see page 77 of the June issue.

In declaring the minimum wage of 37½ cents effective as of June 30, General Fleming made the following statement in connection with wage deductions:

"In scheduling the required public hearing on the 37½-cent an hour minimum wage recommendation for the textile industry, I also asked for evidence on what, if any, provisions in the wage order were necessary to prevent circumvention of the minimum wage by deductions for purchases in company stores and rentals in company-owned houses. This is a matter of administration and was not a part of the committee's recommendation.

"No evidence was introduced in opposition to the immediate establishment of the 37½-cent minimum rate. Evidence was introduced on deductions.

"The wage order to go into effect June 30 will contain no provisions regarding deductions, but I will have a representative take further evidence at hearings in the textile centers with a view to possible amendment of the order in this respect."

Thus the matter of action on wage deductions is still open. Already the hearings planned by the administrator have begun. The best guess at the moment, if any action is taken, is that the criterion of measurement will be the availability, at a given location, of services and supplies through company-owned facilities at prices comparable with similar services and supplies available from outside facilities.

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Designers and Analysts Hold Annual Meeting

The annual meeting of the Textile Designers, Analysts and Technicians Association was held on Saturday, June 14, at the Howard Johnson Restaurant in Fall River, Mass., with President William Savicki, of J. W. Wood Elastic Web Co., presiding. New officers were elected as follows: Leo Chabot, Pepperell Mfg. Co., president; Frank Kostecki, Warwick Mills, first vice-president; Frederick Bradbury, Luther Mfg. Co., second vice-president; Amedee Chevalier, Warwick Mills, treasurer; and Mathew Wayner, of Abdon Textile Co., secretary.

The membership committee includes: Frank Kostecki, chairman; and John Zalid, of J. W. Wood Elastic Web Co., and Thomas Karam, of Berkshire Fine Spinning Associates. The executive committee is composed of the officers and past presidents: William Savicki, and Peter Wayner, of Gilt Edge Textiles, Inc. Edmund Gifford, of Luther Mfg. Co., is in charge of publicity. Alfred Higgins, of Bradford Durfee Textile School, and Malcolm Richardson, of New Bedford Textile School, are the association's technical advisors.

The summer outing for members and their wives will be held at South Shore on July 19, in charge of Frederick Bradbury. Peter Wayner and Amedee Chevalier were made a committee to arrange for the first business meeting of the new season, on September 13.

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New Booklet on Continuous Rayon Spinning and Processing

Industrial Rayon Corporation, 500 Fifth Ave., New York City, has published a comprehensive booklet, "Uniformity Rides The Reels" which depicts "a recent and most significant advance which has been made in the industry—the continuous spinning and processing of viscose rayon".

The text is in three sections. In the first section, the chemical operations by which cellulose is prepared for spinning into rayon are illustrated. In the second section, the many discontinuous operations required for the processing of viscose rayon by conventional methods are shown. In the third section, the company describes and illustrates the streamlined continuous process which has been developed by Industrial Rayon Corporation's engineers, now being successfully employed at its Painesville unit.

The booklet also contains a comparative flow sheet for all methods of viscose process rayon yarn production, a list of the advantages of continuous spinning and processing and a group of important facts about rayon yarns and fabrics.

Utilizing photographic treatment to illustrate all the manufacturing operations described, the analysis is unfolded in a clear and concise form.

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New Acetate Dyes Made by Tennessee Eastman

Tennessee Eastman Corporation, Kingsport, Tenn., as announced in the February issue of COTTON, has begun the manufacture of dyes for acetate rayon. Only recently the company has made available additional dyes ranging through various shades of red, yellow and orange, including Eastone Yellow 6G, Yellow 3GM, Rubine R, Rubine C, Red B, Orange 2R and Orange 3R. They are said to be particularly stable colors, showing good permanence even when steamed under pressure. They can be stripped by soluble zinc formaldehyde sulfoxalate, and discharged by either the zinc or sodium formaldehyde sulfoxalate methods.

Photos by Robert W. Philip

Two scenes during the business sessions at Sea Island. Left, **Judge Eugene Cox** is talking about labor unions. Right, **Charles A. Collier**, discussing the power emergency, **President John A. Miller**, and **Secretary Theo. M. Forbes.**

Power Curtailment is Feature of Sea Island Discussion

GEORGE P. SWIFT, vice-president of Muscogee Mfg. Company, Columbus, Ga., was elected president of the Cotton Manufacturers Association of Georgia, at its annual convention at Sea Island, Ga., on May 29-30. Julian T. Hightower, vice-president, Thomaston (Ga.) Cotton Mills, was made vice-president of the organization, succeeding Mr. Swift; and G. I. Parmenter, manager, Goodyear Clearwater Mills, Cartersville, Ga., was named treasurer. T. M. Forbes was re-elected as secretary, and C. T. Kilgore as traffic manager.

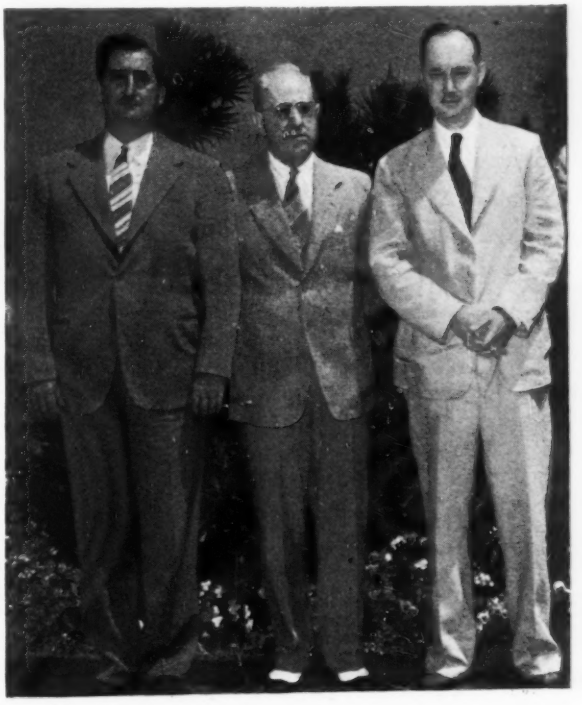
The "annual house party" of the Georgia mill executives and their friends, at Sea Island, which comprises this yearly meeting, is always a delightful and stimulating occasion; and this year's affair took its place in the record as attracting the largest attendance ever, with a program of business and entertainment well in keeping with precedent.

Three major addresses featured the business sessions. Eugene Cox, U. S. Congressman from the second congressional district of Georgia, spoke at the opening session, discussing forcefully and courageously the effects of strikes in hampering the program of national defense, and citing facts and figures demonstrating the dangers of serious sabotage to the defense effort unless some control is exercised over these unwarranted stoppages of work.

J. A. Miller, president and general manager, Exposition Cotton Mills, Atlanta, Ga., who presided at the convention as president of the association, delivered a capable and timely address, dealing with problems of taxation and control confronting the operation of business, and urging more reasonable treatment of business by federal agencies.

Gus W. Dyer, professor of economics, Vanderbilt University, spoke at the final session on Friday, reviewing the history of free business enterprise in this country, its contributions socially and economically, and citing figures to support argument for its continuance without hamstringing legislation and control.

The most vital piece of business at the convention was consideration and action upon the emergency existing in connection with power. Charles A. Collier, vice-president of the Georgia Power Company, which supplies a majority of the mills of the state with electric power, spoke to the convention, and described the unusual conditions as to power supply, for the coming months, faced by the power companies of the Southeast, particularly in Georgia and Alabama. An unprecedented drouth, plus the extraordinary demands for power that have prevailed for months under the increased industrial activity, plus the absolute necessity for supplying aluminum plants in the South and other defense industries with all necessary power, has created a power shortage that places the supply in a critical position, Mr. Collier pointed out. Some form of regulation or curtailment of



New officers of the Georgia cotton manufacturers association. Left to right: Julian T. Hightower, of Thomaston, vice-president; Guy I. Parmenter, of Cartersville, treasurer; and George P. Swift, of Columbus, president . .

"Cotton" Snapshots at the Sea Island Party

Photos by Robert W. Philip

Top row: **Claudius Murchison,** president of The Cotton-Textile Institute, **Mrs. Julian T. Hightower,** of Thomaston, **George P. Swift,** of Columbus, the new president of the Association, **Mrs. Robert O. Arnold,** of Covington, **J. Ebert Butterworth,** of Philadelphia, **Mrs. Fay Pearce,** of Atlanta, and **Mrs. Robert W. Philip,** of Atlanta.

Second row: **Forbes Bradley,** of Columbus, with **George E. Glenn, Jr.,** of Lindale. The next group includes **A. Illges,** of Columbus, **S. H. Sherman,** of Hogansville, **George P. Swift, A. C. Link,** and **Paul K. McKenney,** of Columbus. Last group shows **Ben T. Huiet,** Georgia commissioner of labor, with Secretary **T. M. Forbes.**

Third row: **Walter M. Mitchell,** of Atlanta with **Robert O. Arnold; Mrs. T. M. Forbes** with **George P. Swift;** and **Mrs. Russell Gill,** of Atlanta, with **R. D. Harvey,** of Lindale.

Fourth row: The **Cheatham** family representation at the convention, **Miss Virginia, John H., Mrs. Mac, and Mac Cheatham. Mrs. Ingram Dickinson,** of Atlanta, with **D. A. Jewell,** of Chickamauga.

Fifth row: Left group includes **Mrs. M. M. Trotter, A. B. Edge, Jr.,** and **Mrs. Fuller E. Callaway,** all of LaGrange, with **Eugene Hawkins,** of New York City. At right: **Mrs. Edge, M. M. Trotter, Mrs. W. S. Woods,** of Atlanta, **Fuller E. Callaway,** and **W. S. Woods.**

commercial and industrial use was necessary, he showed, until one or more of the factors mentioned has been relieved.

Mr. Collier presented a clear, straightforward analysis of the crisis. After his talk, President Miller appointed a committee, headed by George P. Swift, to study the matter, and on Friday morning, the recommendations of this committee were adopted by the association. These recommendations, in the form of a resolution, called for a mandatory curtailment of the power supply to Georgia mills of one-third of the individual mill's consumption during the four weeks represented by its June 1 billing, covering the hours of 6:00 A. M. Monday to 12:00 noon Saturday. In itself, this would result in an effective 33⅓ per cent reduction in production by each mill; but, since over the week-end, there is ample power available, the arrangement permits any industrial plant to consume as much power as it desires from 12:00 noon on Saturday to 6:00 A. M. Monday. The program was put into effect beginning on Monday, June 16.

This will mean, in all, a substantial reduction in operations by the mills, although many are planning to recover a good proportion of the lost time through operating on Saturday afternoon and night and through Sunday. This means drastic adjustments in the operating schedules of the mills, and will cause inconvenience to them and their employees, but generally, the situation has been met cheerfully and there is practically complete co-operation in this effort to contribute to a solution of the emergency crisis.

On Thursday afternoon, the usual golf tournament of the convention was held; the results are reported elsewhere. There was also a bridge party for the ladies in attendance. On Thursday evening, the annual banquet of the association was held, with a humorous address, presentation of the golf prizes, and the awarding of a gift to Retiring President Miller by John H. Cheatham in behalf of the association.

Friday morning, the concluding session was devoted primarily to reports of the association's committees, a short business meeting, and election of officers. In addition to the new officers named, the following were elected as directors of the organization to serve three-year terms:

A. Illges, vice-president, Swift Spinning Mills, Columbus; J. M. Longley, agent, The American Thread Co., Dalton; S. H. Swint, president, Graniteville Co., Augusta; and W. M. Wellman, president, Oconee Textile Co., Whitehall.

Photographs in this panel by Theo. M. Forbes

Congenial groups in the patio at Sea Island. Top row: **Mrs. Scott Russell**, of Macon, Ga., and Mr. Russell, executive vice-president of Bibb Mfg. Co.; **Mrs. Robert O. Arnold**, of Covington, **T. G. Graham**, vice-president, B. F. Goodrich Co., and **Mrs. Norman E. Elsas**, of Atlanta.

Second row: **John H. Cheatham**, of Griffin, **Mrs. T. M. Forbes**, of Atlanta, and **W. M. McLaurine**, of Charlotte; and **Mr. and Mrs. I. C. Milner**, of College Park.

Third row: **Mr. and Mrs. Frank G. North**, with their son and daughter, **Mr. and Mrs. Ben Bailey**, all of Atlanta; **Ernest E. Dallis**, commercial agent of the Bureau of Foreign & Domestic Commerce, Atlanta, with **William R. Beldon**, manager, Clark Thread Co., Clarkdale.

THE GOLF TOURNAMENT AT SEA ISLAND

AN enjoyable feature of the Georgia association convention at Sea Island was the golf tournament for members and guests. An excellent group of prizes, provided by a group of non-member attendants connected with supplying companies, was awarded at the banquet by W. R. Beldon, chairman of the golf tournament committee.

Tom A. Mott, of Corn Products Sales Co., Greenville, S. C., won the prize for low gross (a sterling tray) for members and guests. Other prizes, and their winners, were:

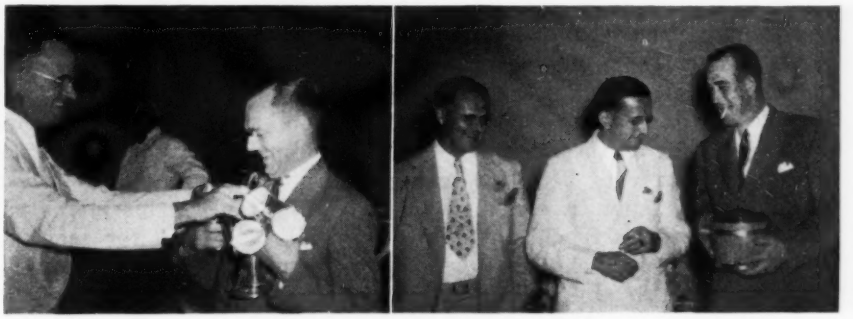
Second low gross (all participants), 6 bread-and-butter plates: Fred Vandergrift, Pennsylvania R. R., Atlanta. *Low gross, members only*, Sterling bowl: Walter M. Wellman, Whitehall. *Second low gross, members only*, sterling tray: C. D. Morris, Palmetto Cotton Mills.

Low net, members only, annual trophy for one year and 6 sterling goblets for permanent possession: Frank M. Kimble, Mandeville Mills, Carrollton. *Second low net, members only*, sterling bowl: D. A. Jewell, Chickamauga.

Low net, guests only, silver water pitcher: Harry S. Roberts, Allis-Chalmers Mfg. Co., Atlanta. *Second low net, guests only*, candy dish: R. A. Wells, Bemis Bro. Bag Co., Talladega, Ala.

Special prizes, with all participants eligible, were awarded as follows: *Low gross on par 3 holes*, sterling bowl: S. A. Roane, Abbott Machine Co., Greenville, S. C. *High gross score*, badminton set, S. P. V. Desmond, Crompton & Knowles Loom Works, Charlotte. *Most balls lost in water*, ice pail: E. V. Wilson, Watson-Williams Mfg. Co., Greenville, S. C. *Tee shots nearest cup on par 3 holes*, slack suits: Ingram Dickinson, Southern Belting Co., Atlanta; C. G. Stover, Corn Products Sales Co., Atlanta; and Norman E. Elsas, Fulton Bag & Cotton Mills, Atlanta.

The golf committee consisted of: Chairman, W. R. Beldon, Clark Thread Co., Clarkdale; J. W. Stribling, Universal Winding Co., Atlanta; and Robert W. Philip, Editor of COTTON.



Golf winners at Sea Island. Left, **J. W. Stribling** awarding to **Frank M. Kimble** the silver goblets he won with low net score. Frank has two legs on the association trophy; one more and it's his for keeps. Right, three other golf winners, **Russell A. Wells, Ingram Dickinson**, and **E. V. Wilson.**

Spun Rayon Processing Problem

EACH MILL running blended stocks of cotton and rayon staple has its own individual problem, but a discussion of these various and sundry problems proves of interest to the many plants processing spun rayon. Recently the editors of COTTON had a request on methods of mixing a blend consisting of 85 per cent cotton and 15 per cent rayon staple. The cotton being run is 1-inch, mixed with 1 1/16-inch, 4½-denier staple fiber. Other questions were methods of preventing breaking in the cloth where the mix is blended on the drawing; ways of keeping waste to a minimum; and the re-working of waste from blended stock.

The following answers, received from three different mills with experience on rayon staple, give practice in three different southern states.

The first man replied as follows in answer to the questions: I first wish to suggest that a longer staple in spun rayon be run, as this will be helpful. Spun rayon lacks a great deal of having the strength of cotton, due largely to the fact that the spun rayon fibers are straight and slick, and slip when any strain is put on the yarn. Contrary to this, the individual cotton fibers are spiraled or corkscrew like and cling to one another to give strength to the roving or yarn. If this man will use spun rayon cut to 1¼-inch or even 1½-inch, he will find this helps the strength of the yarn made from the mix.

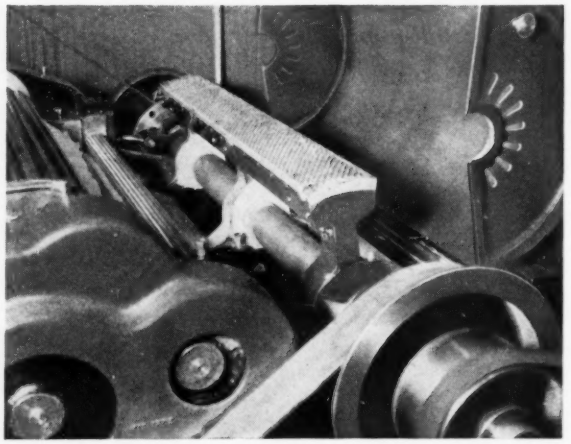
Run a Low Beater Speed

The beats per inch at the picker should not be high. Around 20 to 25 strokes per inch will be sufficient. The spun rayon fibers are very easy to break and gentle treatment is necessary.

As to the method of making mixes in the opening and picking where one-process picking is in force, I think the most effective method is to start by placing layers of cotton and spun rayon on the picker room floor. When you have this in layers representing 15 per cent spun rayon and 85 per cent cotton you should then mix thoroughly by hand before throwing on the feed apron at the pickers. If the mix is not thorough here you will have poor results in getting the mix through the mill, then have poor results in the dyeing of the cloth made from the mix.

My suggestion is, if the purchaser will agree to it, to change the mix to 16⅔ per cent spun rayon and 83⅓ per cent cotton so that the mixing could be done on the drawing—one end of cotton in each six ends up behind the drawing. This would enable the manufacturer to keep the waste separate and to handle the spun rayon more gently until the drawing process is reached. In this way the spun rayon waste would be 100 per cent spun rayon and would not present any problem in regard to re-running the waste.

Where mixes are made on the drawing only there should not be any great difficulty in keeping the rayon from streaking in the cloth. If the stock does not mix thoroughly with one process drawing, it may be necessary to use two processes to get a thorough mix that will not streak. The writer has not known any difficulty with the rayon streaking in the cloth where two processes of drawing were used. It would be possible to put the mix through still another process of drawing to get a thorough mix but this should be avoided if possible since the fewer handlings the better with spun rayon.



General practice involves use of at least one Kirschner beater in picking on rayon staple fiber . . . . . .

Where the rayon and cotton mix is run together at the cards, the card settings should be left substantially the same as where a 100 per cent cotton mix is being run. With only 15 per cent spun rayon in the mix it would not be advisable to reduce the percentage of strips or otherwise cut down on the waste, as is done when running 100 per cent spun rayon.

Re-Working the Waste

The spun rayon costs quite a bit more than cotton and it is generally necessary to re-work the waste. This presents quite a problem if the volume is small—there is generally a batch left over in small orders. However, if the inquirer is running a big volume of the mix, he should not have any great difficulty in getting the waste re-run. The picker lap waste and the card sliver waste can be spread on the opening room floor and mixed with a new batch of 15 per cent spun rayon and 85 per cent cotton. The card strips can likewise go back and start through with a new batch, if the customer is not too fussy about getting some neps and leaf from the strips in the yarn. This problem has to be worked out for each individual fabric. In some cases it is necessary to sell the strips in order to give the customer the quality he desires in the fabric.

The next man to answer the inquiry said that much of the trouble could be with the rayon he is trying to run into blends, and suggested first the

classification into deniers as follows:

Sea Island cotton deniers	1.08
Egyptian Sakel	1.26
American Cotton	1.80
Indian Cotton	2.52

This man is trying to run 4.50 denier. The reason we use 1.50 denier rayon is that it is nearer the American cotton denier of 1.80 and the cards treat it as they do cotton. In the first place, the cards take out the 4½ denier staple rayon. Rayon must be nearer the 1.80 denier for good running work.

On one-process pickers, run them as you do your regular cotton mix. Mix it in the opener room. Use 75 pounds of rayon with 425 pounds of cotton, etc. A layer of cotton and a layer of rayon will give a good blend, because the 3-beater picker following the opening equipment mixes the stock.

Card Settings for Quality Work

In this particular case of 85 per cent cotton and 15 per cent rayon staple, use the regular cotton card settings for quality work. If too much quality is not demanded, set the card screen as close as possible and turn the mote knives upside-down or remove them and slow down the top flats ¾-inch per minute. Set the front and back plates as close as possible not to rub.

The stock can be blended at the drawing where there are six ends up. At the breaker drawing run it through three processes of drawing. In running it through three processes of drawing it will not streak, and this also cuts the card and picker waste as each product is run 100 per cent and the waste can be run back. For waste on roving and spinning, put it in the waste house to be baled and sold unless there is colored work and then it can be dyed black and used in suitings, dress goods, or work shirts.

The last settings I gave will keep the card waste to a minimum.

Any fibers blended together where the diameter varies as much as from 1.80 denier to 4.50 denier will give trouble at the cards and will cause much shedding at the loom and in spinning.

The third answer to the questions is given as follows: The problem of blending two or more fibers successfully to get an even mixture in the finished yarn depends primarily on the percentage of each fiber in the mix. A 50-50 mix of any two fibers is naturally the easiest type of blend to run successfully because as the percentages change to 75-25, 80-20, 85-15, 90-10, or 95-5, the more difficult the problem becomes. A 5 per cent blend of any fiber with another is very similar to the proverbial "needle in a hay stack"—sometimes it is there and sometimes it is not.

Other important factors in addition to the percentages of each fiber blended must be considered in determining the proper procedure or method of blending economically and successfully. These factors are: Type and characteristics of the two fibers to be mixed; type of yarn, whether warp or filling; trade requirements as to quality or evenness of the blend in the finished fabric.

No manufacturer likes to spend more on the manufacture of any fabric than the trade demands, consequently in some cases a raw stock blend can be made satisfactorily in the opening or picker operations where the two fibers have the same characteristics as far as carding is concerned, and where the percentage is not smaller than 25 per cent on the blend to be made. Thus, it is practical to mix 3 denier viscose and 3 denier acetate spun rayons where a cautious method of handling is used as the card has practically the same action on these two fibers; also, it is possible to make a blend of fine denier rayon and cotton in like manner if the finished product is of the low price range for print goods or bleached goods. However, if the quality requirements of the fabric are for the "up-town" trade, and are to be finished in deep shades, every known precaution must be taken to prevent trouble. It has been the writer's experience that the most difficulty is experienced with blends in the filling yarns rather than the warp.

The general appearance of the fabric warp wise is somewhat toned down on an inferior blend due to the general mixing because every end comes from a different spindle at the spinning. However, an entire bobbin of filling must be woven in one place in the fabric, the length of cloth woven depending on the picks per inch and the size of the filling used. Thus, we can readily see that an inferior mix in the filling will cause streaks or bars in the goods; in some cases every filling change can be seen at a great distance after the goods are finished, especially if they are dyed.

We cotton and rayon mill men have some close relatives in the woolen and worsted manufacturing game that are brought up and thrive on blending problems. The writer had the pleasure of conversing with a certain superintendent of a plant manufacturing high grade all wool men's suitings in regard to blending problems. The impression that this party left with me was that "every sheep dyed a different shade" and in some cases where a blend was run of stock dyed wool such as oxford grays, a box loom had to be used with several shuttles on a pick-and-pick layout in order to break-up heavy and light streaks. Such a fabric on raw stock dyed synthetic fibers or a fabric composed of acetate and viscose cut staple in small quantities for cross dyeing presents about the same problem.

On the woolen system the method of yarn manufacture is radically different from cotton. All the machinery is built and the job is laid out as a whole with this one problem considered. Cotton mills were not built with such a problem in view, consequently, it is necessary to make expensive detours to handle certain blends successfully.

Carding the Spun Rayon

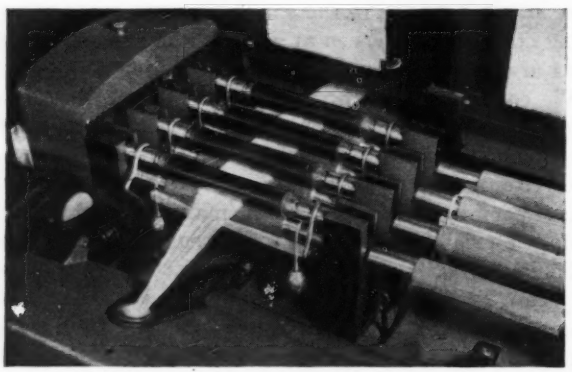
It is very easy to card a fine denier rayon, however, the coarser the denier the more difficulty is experienced due to the fibers falling apart, splitting, etc. To overcome this trouble the card settings must be opened; the mote knives removed and a metal pan inserted beneath the licker-in. In extreme cases a V-shaped pan must be inserted between the doffer and trumpet to prevent the web sagging and splitting. After changing a card in such a manner we must realize that all cleaning action on the stock is eliminated, the card merely functions as a link; that is, the card simp-

ly changes the stock from lap to sliver form. Should a mixture of cotton and coarse denier rayon be attempted on such a set-up the cotton stock would have excessive neps and the resulting yarn would not be acceptable.

Another serious objection to running a small percentage of coarse denier rayon fibers with cotton on a card is due to variation in the percentage of the fibers before and after stripping the cards. The coarse and smooth fibers such as rayon have a tendency to "rise and flow" ahead of the tangled and interlocked cotton fibers. After a card is stripped the clothing begins to fill up again with only cotton fibers, which in turn means that the percentage of rayon in the sliver is momentarily increased.

Processing Fibers Separately

A good procedure in handling a blend consisting of 85 per cent 1-inch cotton and 15 per cent 4½ denier 1 1/16-inch staple spun rayon to insure an even blended yarn is to process each type fiber separately through the pickers and cards, making the necessary changes for the correct handling of each stock at the two processes. By following such a procedure all white waste can be re-worked from these two processes without worry so far as correct percentages are concerned. It



Drawing roll detail showing wider roller spacing developed for longer staple rayon (Whitin Machine Works photo.)

is very necessary that the rayon be tinted a deep color at the picker or opener hopper by means of a spray nozzle or else purchased with the tint already added. This precaution must be taken to insure against a "slip-up" during the blending processes at the drawing and fly frames while working towards the required percentages.

Lay-Out for Running 85-15 Blend

A 55-grain card sliver should be run at the cards on both cotton and rayon stock. The breaker drawing should have five ends up, three rayon and two cotton. The sliver should be put up one end of rayon and one end cotton. The resulting breaker drawing sliver should be 60 per cent rayon and 40 per cent cotton, 55 grains per yard. The finisher drawing should only be used for doubling and drafting, six ends up producing a 60-grain sliver consisting of 60 per cent rayon and 40 per cent cotton. The slubber should draft this sliver to a .60 hank roving.

Use double roving at the first intermediate, creeling one end of .60 hank roving 100 per cent cotton and one end of .60 hank roving 60 per cent rayon and 40 per cent cotton. The resulting first intermediate roving should be 1.50 hank of 30 per cent rayon and 70 per cent cotton.

Use double roving at the second intermediate, creeling one end of 1.50 hank roving 100 per cent cotton and one end of 1.50 hank roving 30 per cent rayon and 70 per cent cotton. The resulting second intermediate roving should be 3.00 hank roving of 15 per cent rayon and 85 per cent cotton. This roving should be run on a jack frame to eliminate any possibility of a spiral effect with double roving producing a 5.25 or 7.00 hank roving, depending on the yarn counts to be spun. Should only a coarse yarn be desired from the mix it will be necessary to alter the percentages along the route in order to eliminate the jack frame as this would be a needless process for coarse yarn counts. However, it is very necessary that no blending be done on the last process preceding the spinning as a spiral effect in the yarn is likely to result.

Compensate for Shedding Rayon

On handling coarse denier rayons with other fibers it will be found that the rayon has a tendency to shed very heavy in all processes. Some allowance must be made to compensate for this loss in order to have the required percentages in the finished product. This is easily accomplished by running the cotton card sliver slightly on the light side and the rayon card sliver slightly on the heavy side.

Extreme care should be taken to see that the proper twists are run in all rovings. Any mixture of two different types of fibers is naturally hard to draft evenly. In this particular case if the rovings are too hard the cotton will be pulled through in bunches leaving the rayon and making small places in the roving, which in turn means bad running spinning and weaving. Also, care should be used in making piecings on the fly frames, especially where blending is being done. A great many fly frame tenders, if left to his or her own resources, will twist on a full package of roving and make a doubling of one to three inches in length. The yarn from such a practice will have a heavy place with the rayon content either too heavy or too light.

All soft waste from drawing, fly frames, and spinning can be saved until enough is accumulated to make a card lap. This lap should be run on a card that is set up for rayon and the draft should be altered to produce a sliver that is to be run on the finisher drawing, 60-grains per yard. The waste sliver should be run on the finisher drawing with one end up with five ends of regular 60 per cent rayon and 40 per cent cotton stock.

Tinting Rayon Staple Fiber

By having the rayon tinted a deep color it is very easy to see when the handling of the stock is not correct as the density of the color is altered as the percentage of the rayon is decreased along the route of the various processes. Should a doubling be made of all cotton the stock will be all white; on the other hand, should a doubling be made of rayon mixture, the resulting roving will be much deeper in shade than the corresponding roving of the same hank that is made properly.

CURRENT TEXTILE TOPICS

Year of defense brings new status

JUNE MARKED the start of the second year under defense and the twelve-month has brought a transformation. The chief definite thing for cotton manufacturing is an unprecedented rate of production, with buyers pushing persistently to cover requirements far in advance. The unforeseen things that have created a new status are various and have made new problems.

Action for ceiling prices on combed yarn brought a climax in the general program of Leon Henderson for regulation of commodities. At the time of writing the issue with Congress as to legal authority was not settled. Combed yarn did have an unduly rapid advance and a corrective influence evidently was needed. Yet the stimulation of products of agriculture by high parity prices ill consorts with the moves to check industrial goods.

When the combed yarn ceiling action was taken, the market had risen out of proportion to the advance in raw cotton. But the new parity payments scale later kept cotton rising and from mid-January to mid June the spot price in New York was up from 10.45 to well above 14 cents a pound. Moreover, the new minimum wage scale, effective as of July 1, entered the picture as a part of the new status.

Contradictions mark policies

This was one phase of new conditions faced in June, of which others were the enforced curtailment by mills through power shortage, consideration of possible priorities and the demand for data on defense work. Continuing on the control of prices matter, the Senate Agricultural Committee indicated that the action on combed yarn was a blow at raw cotton growers, whom the Administration desired to aid.

Later this point was stressed by Russell T. Fisher, president of the National Association of Manufacturers, who said: "The whole Washington picture is one of contradiction. The Department of Agriculture is spending money to promote the increased use of cotton on the one hand, while Congress considers legislation which, in its effect, would decrease consumption."

Mr. Fisher in this statement referred to other proposals than the ceiling on yarns, but all contributed to confusion, with inflationary steps in some directions against an ostensible program to hold prices all around in check. It was significant, meantime, that the noted English economist John Maynard Keynes saw the United States government moving too slowly to prevent price inflation as simultaneously a new record for industrial output in May was accompanied by the largest price rise since the speculative advance in the early autumn of 1939, according to the Department of Commerce.

Delivery problem spurs priority talk

Last month found the discussion of possible priorities a moot one, because of the difficulties in making requisite deliveries of defense goods. This condition naturally was aggravated by drought in some mill areas and consequent revision of production schedules, notably in the Southeast.

It was hoped early in the National Defense Program, as may be recalled, that the mills would not undergo serious disarrangements in their lines of production. But under the Unlimited National Emergency, it has appeared that growing pressure might necessitate ordering a shift to the most essential lines. The appointment of a textile priorities committee by OPM obviously was a recognition of a serious position.

Mill men have not been surprised by the tendency toward increased regulation of their operations. While striving to supply the demand of record proportions, however, it was irksome to be confronted early in June with a complicated task of listing each item being supplied for defense and computing the cost basis along therewith. This move to show officials what profit remains from the government prices paid was accepted in a favorable manner, but the demand for returns within a very short period when staffs already were overworked was cause for complaint.

Cotton tendency stirs good buying

Temporary stalling of activity in goods on the May move for ceiling prices on combed yarns was quickly followed by new purchasing in volume. The June trading revealed a lack of early deliveries in staple printcloths and sheetings. In fact the signs of priorities led to withdrawals from civilian markets by some mills. Hence buyers, especially many who had underestimated requirements, pushed

THE MILL shown in the accompanying illustration manufactures high grade rayon fabrics. Lighting is an important element in all of the manufacturing processes and the department shown is typical of the manner in which the rest of the plant is equipped. These rectified fluorescent units are of the single lamp type. Fixtures are staged on 7x10-foot centers about 9 feet above the floor and provide 40 to 50 foot-candles of general illumination on working points. For other typical examples of fluorescent installations and for up-to-date information on this type of illumination, see March 1941 issue of COTTON. Illustration courtesy General Electric Company.

hard for goods which were hard to get.

Another impetus to buying was the rise of raw cotton, which superseded the yarn situation in market attention. Trade opinion was that price advances could not be halted unless a comprehensive program considering wages and raw materials were invoked. This appeared to be a remote prospect, so buyers were ready to cover months ahead.

How the dual demands for goods over a year, supplemented by the rising basis of costs in raw material and wages, have affected prices for cloth is indicated by the following comparison of staple printcloths:

	June 12	Year ago
38½-inch 60x48s	7¼	4
38½-inch 64x60s	8⅞–½	4⅝
39 -inch 68x72s	9⅞–¼	4⅞
39 -inch 80x80s	10⅞–¾	6¼

New England Mill Situation

Active demand and strong conditions in the market for fine goods the first part of June naturally improved the position of New England mills. They were already so well sold, however, that the buying was checked by sellers' caution against anything suggestive of speculative activity. Rising cotton prices encouraged buyers to look far ahead, even at higher prices for their goods, but they were not allowed to take all they would have.

It was stated that manufacturers of fine combed goods were not sold so far ahead as other mill divisions because of this cautious policy. Right through the emergency of the National Defense Program the mills on fine cloths have maintained their modern policy of reasonable restraint. Efforts for an orderly market on a sustained basis have in recent years proved efficacious and mills are not beguiled by the boom conditions to relax their sound policy.

Drought conditions were reported for a time as having some effect upon the market for some New England mills, although not so definite as in the Southeast. For certain mills, it appeared that curtailment for conservation of power might necessitate a prorating of production. This led to temporary withdrawal of goods lines and refusal to quote for any delivery.

New developments in the district

While the predominance of fine goods in production of the Northeast has restricted the business for defense, new uses of combed goods for military purposes have been appearing. Powder bags made from 60s to finer yarns are cited as a case in point. This tendency toward new uses intensifies buyers' desire to forestall shortage and also sellers' conservatism on civilian lines.

Since the workers in nearly all cases among New England mills have been receiving more than 37½ cents an hour during the past quarter, the new minimum wage basis has very little direct effect. In fact the Bureau of Labor Statistics, state officials of the National Association of Cotton Manufacturers, has produced evidence to show that the average in the North is 50.7 cents an hour.

Other legislative and control matters are of more concern in an era when business has to devote a considerable share of its attention to Washington activities. Not only the conflicting cotton and yarn situation, but a complex goods situation is adduced. The OPM seeks increased production, but the OPACS takes price action "that will apparently eliminate the marginal mills that have gone into production of yarns and fabrics not normally within their field of manufacture", says Mr. Fisher.

Call for workers sign of changes

Significant of the changes under National Defense and current prosperity is the fact that, for the first time in more than 20 years. a mill at Lowell, Mass., recently made a city-wide appeal for workers. The Merrimack Manufacturing Company requested the Chamber of Commerce to broadcast an appeal for men to operate drawing frames, strippers and carding machines. Heavy government demand was contributing to a business necessitating three shifts of operation in order to meet requirements.

Another sign of similar import was the recent announcement by Robert P. Dolan, acting regional director of the wage-hour division, of permission for employment of learners in the textile industry at less than the minimum required by Federal law. The change allows the retraining, when experienced workers are not available, of newly hired employees who may have had experience in some other occupation.

Of different character have been some recent strike situations in mills. The Kerr Thread Mills had an unauthorized strike for higher wages, in spite of working on defense orders. The Hathaway Manufacturing Company suffered closing from complicated conditions. A strike of drawing-in girls and sympathy walkout by battery men was settled, only to be followed by extended closing because of action against a contracting concern employed by the company.

Manchester Narrow Fabrics Company is a new enterprise organized by Amoskeag Industries, Inc. Space has been leased in the old Amory Mill, Manchester, N. H., for the manufacture of parachute webbing and other narrow fabrics used by the Army and Navy.

"THE SITUATION" as seen Across an Executive's Desk

June 18, 1941

AS THIS IS written the cotton-textile industry for a full month has been going through the most paradoxical situation in its history. On one hand productive output has reached a new peak, and on the other the sales market is confused to the point of demoralization.

To elucidate: During May and up to June 15 cotton mills operated at the highest daily rate on record, as mills on every cotton construction strive to meet their specifications on shipments. And during the month of May a total of 918,902 bales of cotton were consumed compared to 641,636 bales for the same month last year. Active cotton spindles during May were 22,980,286 compared to 22,213,378 for the same for the same period last year. The third shift is in evidence wherever possible, and where mills are not equipped to run three shifts they are handling Saturday production on time-and-half wages.

Price Ceilings

Just as the mills had reached this new high peak in production activity and just as the mills were beginning to feel the healthy economic results of this unprecedented demand the industry was stunned by the order issued on May 26 by the Office of Production and Civilian Supply setting a ceiling on combed yarns at approximately 20 per cent below the current market levels. The order was effective the date it was issued and applied retroactively to all contracts then in existence as well as to any new contracts taken in the future. Because of the many ramifications in cotton yarn trading which entail a thorough knowledge of the raw cotton market, various trades' customs, quality and descriptions of yarn which were not defined under the ceiling order, unlimited confusion was created in the combed yarn market; and because of many adjustments which were necessary to be made before the order became a workable one and because of the slowness in getting these things

straightened out, the combed yarn market has been frozen since May 24. It is understood that mills are producing and shipping against old contracts on memo only, but that no sales are being made under the ceiling regulations as yet.

The reaction in other sections of the textile industry have been worthy of study. Combed yarn woven goods, which were not included under the ceiling order, continue to advance in price and as recently as today combed lawns moved up 2 cents a yard to reach a new high level, and sympathetically quotations on other combed yarn goods were moved higher.

In the print cloth section the price trend is higher and at this point print cloths have advanced 100 per cent over their prices six months ago. Carded yarns, which have been the only yarns quoted in the market for nearly a month, are not as high as they have been but they have not yet reached their normal comparative level below combed yarns and in many cases carded yarns are being quoted at combed yarn ceiling prices.

It was Mr. Henderson's idea in issuing the combed yarn order that other cotton textile productions would seek a comparative level, but as pointed out, this has not been the case at all. And while one branch of the industry's business is paralyzed other branches of the industry continue their upward trend.

And into this entirely unprecedented situation are injected other determining factors which simply add more incentive for higher prices.

New Minimum Wage

An official order signed on June 13 by the Administrator of the Wage-Hour Bill definitely sets a minimum wage for the textile industry at 37½ cents per hour. This is no surprise. It had been anticipated, but until the order was filed it was not an official element in the picture. The order does not mention the deduction question and it is understood that that will be studied further within a reasonably short time. At this point we have had no estimate as to the total increase in wages this new high minimum will invoke, but it seems safe to assume that with it and with the high operation record of the mills that more spending money will be in the pockets of the textile employees than they have ever had reason to expect.

On Monday, May 26, President Roosevelt approved the 85 per cent parity loan bill for cotton, thereby immediately increasing the loan value of cotton from approximately 9 to 13 cents. Added to the 13 cent loan figure will be 1.03 cents for soil conservation and 1.03 cents for parity payments, bringing the total proceeds through governmental action to slightly more than 16 cents per pound to the cotton farmer. This is an increase of 4 cents a pound on an estimated 12,000,000 bale crop, or an additional $240,000,000 for southern cotton farmers.

Cotton Loan Facts

It is just as well here to review a little bit on the cotton loan situation. The immediate effect of the passage of this bill, as you can see, is that it increases the farmers' equity in loan cotton. The government has announced that if it should take title to loan cotton, producers will be paid the difference between prevailing market prices and loan interest and carrying charges on the pledge to cotton. Equities in the 1930 loan cotton range at this time from $4.50 to $8.00 a bale. Equities on the 1940 cotton range from $12.00 to $20.00 a bale. The Government holds title to over 6,000,000 bales produced in 1934 and 1937, to over 2,000,000 bales still left in the loan from the 1940 crop, and to 1,500,000 bales of the 1938 crop. It is expected that at least 2,000,000 bales of this year's crop will go into the loan which will leave at least 11,000,000 bales of cotton in the loan.

Any mill which wants to buy cotton must pay more than its loan value.

Other conditions enter into the cotton picture particularly on the longest staples. Since the Egyptian crop has been cut off, domestic Pima and SXP and Sea Island cotton are going to climb to new highs and we have heard that the county agents are circulating through the western territory urging farmers to hold their Pima and SXP off the market as they can expect to get at least 50 cents a pound for it by fall. If those staples command 50 cents it is reasonable to expect the small Sea Island crop will bring prices reminiscent of World War I days.

Shirt, shorts and skirt (not shown) for the teen-age girl in a laundry-approved Teca blend fabric from Marvlo. Woven with crimped acetate rayon. Courtesy, Tennessee Eastman Corp. . . . .

And while all of this troublous water bubbles and boils in the textile business caldron, other phases seem calmer. Several important developments in textile organization work have been accomplished. As predicted in these columns last month, Edward Pickard has a new job. A working arrangement between the Textile Foundation and the United States Institute of Textile Research has been perfected and while the two organizations remain independent they have a common full-time executive secretary in Mr. Pickard, who has resigned his position with the United States Department of Commerce. He has been chief of the textile division there for 20 years. Thus are coordinated efforts of two very important groups in textile research and thus is recorded probably the most important and progressive step between two textile organizations in many years.

Another merger is that of the promotion activities of the Cotton-Textile Institute and the National Cotton Council. This was arranged through the Cotton Council's invitation to cotton manufacturing interests to be represented by 30 delegates as the sixth integral part of the National Cotton Council and through a financing program by which mills pay to the Council 5 cents per bale on all uncompressed cotton, allowing however for the deductions already pledged to the Cotton-Textile Institute of 2 cents a bale. In this co-ordinated program the cotton-textile industry will have the benefit of the aggressive and progressive promotion program directed by the National Cotton Council and will probably find the results far greater, comparatively speaking, than the small amount of money they plan to invest in it.

Plans have already been announced by the State Department for the Pan-American Cotton Conference to be held in Memphis October 16. At this point, although the invitations have been issued to representatives of South American countries to attend this Congress, it is impossible to predict anything in connection with it as the international situation may, and could, change over night, thereby cancelling such a Congress. However, the State Department is carrying out with enthusiasm the Congressional resolution to participate actively in the Congress and it is hoped that it will be held and that it will bring about closer relations with our southern neighbors.

COMMENT on the COTTON MARKET

New Orleans, June 16, 1941

COTTON climbed steadily during the past month with only an occasional setback of moderate proportions and at the writing of this, is at the highest point recorded since early in April 1937 with all months, including July, above the 14 cent level. New highs were of frequent occurrence during this period. Since the middle of May prices have advanced an average of 125 points for futures or $6.25 a bale. Current quotations represent a gain of over $16.00 a bale since the middle of April.

At the close of June 16th, July was quoted at 14.02 in New Orleans and 14.00 in New York. October was quoted at 14.26 in New Orleans and 14.23 in New York. At the same time Middling $\frac{15}{16}$-inch was quoted at 13.76 in New Orleans and 13.84 for the average of the ten designated markets.

The same influences that started the upward price movement two months ago were still the principal causes of this month's advance. These were expectations of a high loan, increasing tightness of spots and loan certificates, large sales of dry goods with much consequent price fixing by mills, and growing fears of a small crop due to six weeks of unfavorable weather in practically all sections of the cotton belt and large weevil emergence. Western states had excessive rains throughout this six weeks period while the east suffered from one of the worst droughts in its history.

Reports from the Northwest say that many farmers in that section have not planted over half of their crop while planting in central and south central Texas is still unfinished. Southwest Texas is reported to have one of the latest crops in many years and does not expect to begin marketing its crop until after August 1st. It usually markets a considerable portion of its crop during July. Eastern states received general rains during the second week in June which broke the drought but did not give all the moisture needed. On the other hand, rains continued in western states and conditions in this large area are reported critical. Some of the most competent observers in Texas doubt if that state can make more than a moderate size crop. If the rains in that state continue after the middle of June they may cause a disaster, it is claimed. State entomologists report weevil emergence in Texas the largest since they began keeping a record of their emergence. Similar reports come from state and government experiment stations in Louisiana, Mississippi and South Carolina. Weevil are already reported active in the fields of southern sections and state entomologists are warning of probable heavy damage this year.

Rumors that the Commodity Credit Corporation intends to change the basis for loan differentials this year from Gulf ports to mill points proved an unsettling influence for a time because of fears that it might unsettle the futures market. Futures quotations are based on the price of Middling $\frac{15}{16}$-inch at the ports. Reports which have been current from time to time indicate that it is the intention of the Commodity Credit Corporation to make the highest loans at mill centers in the Carolinas and to deduct freight and other charges from these points in fixing the differentials at interior shipping points. If this plan is put into force loan rates at central interior points will be higher than at the Gulf ports.

A late report from Washington says that the Commodity Credit Corporation is expected to make public in the near future its general policy to be followed in the 1941 loan program, including location differentials and that officials of that corporation lean towards mill points as the basis for these differentials. There has, however, been much objection to this program and the basis for differentials is still more or less uncertain as this is written. Recent reports from Washington indicate a loan rate of 14.40 to 14.50 might be the basis for mill centers.

The loan rate will be 85 per cent of parity as of August 1st when the loan rate must be fixed according to existing laws. Cotton parity is now 16.12 for Middling $\frac{7}{8}$-inch. Parity is expected to be at least 16.25 by August 1st, probably higher. A parity of 16.25 calls for a minimum loan of 13.80 for Middling $\frac{7}{8}$-inch and 14.05 for Middling $\frac{15}{16}$-inch. The House Agricultural Committee has voted to investigate the formula used by the Department of Agriculture for calculating the parity of cotton and other farm products. Members of this Committee have been quoted in the Public Press as expressing the opinion that the formula used by the Department does not reflect actual values and that they are in favor of Congressional action which will raise the parity. Any increase in the parity will automatically raise the loan rate. Officials of the Commodity Credit Corporation are quoted as expressing the opinion that between 5,000,000 and 7,000,000 bales of this year's crop may go into storage sometime during the season.

Recent statements of the Commodity Credit Corporation show that after allowing for withdrawals to June 7th, that Corporation holds 1,146,000 bales of the 1940 crop under loan and 1,443,000 bales of the 1938 crop. Withdrawals between June 1st and 7th amounted to 210,000 bales. The New York Cotton Exchange Service says trade authorities express the opinion that withdrawals from loan stocks between June 1st and July 31st will not exceed 750,000 bales and that if withdrawals do not exceed this figure free stocks of cotton at the end of the season will approximate 3,300,000 bales, including mill stocks. This service, however, expressed the opinion that withdrawals will exceed the figure mentioned above and adopts withdrawals of 1,350,000 for the remainder of the season as the basis for a calculation indicating possibility of free stocks of cotton at the end of the season, including mill stocks, of approximately 4,700,000 bales. Mill stocks at the end of May amounted to 1,928,000, according to the Census Bureau. These figures indicate the possibility that actual free stocks, exclusive of mill stocks, at the end of the season will run between 1,400,000 and 2,800,000. This service says consumption is now running at the rate of 10,700,000 bales for the season. It also predicts exports in excess of 1,000,000 next season. These figures point to tight spot conditions unless the crop turns out to be a large one, an eventuality which now seems improbable.

CENSUS REPORT OF COTTON CONSUMED AND STOCKS

Consumption of Lint— Bales—	This Season	Last Season
In United States, May	918,902	641,636
In United States, April	920,142	623,098
In United States, 10 months	7,914,140	6,595,635
In Cotton Growing States, May	785,913	554,258
In Cotton Growing States, 10 months	6,745,724	5,622,339
In New England States, May	104,170	71,734
In New England States, 10 months	934,283	787,233
In All Other States, May	28,819	15,644
In All Other States, 10 months	234,133	186,063
Mill Stocks		
In United States, May 31	1,927,939	1,314,792
In United States, April 30	1,933,507	1,470,527
In Cotton Growing States, May 31	1,536,640	1,049,885
In New England States, May 31	331,536	210,834
In All Other States, May 31	59,763	54,073
Warehouse Stocks		
In United States, May 31	11,358,417	10,091,517
In United States, April 30	12,374,839	10,732,290
In Cotton Growing States, May 31	10,372,929	10,027,199
In New England States, May 31	363,923	56,915
In All Other States, May 31	21,565	7,403
Active Cotton Spindles		
In United States, May	22,980,286	22,213,378
In United States, April	22,787,396	22,288,832
In Cotton Growing States, May	17,339,358	17,004,576
In New England States, May	5,004,576	4,612,158
In All Other States, May	636,422	596,644
Exports for May	71,539	226,469
Exports for 10 months	975,540	5,921,431

AMERICAN CONSOLIDATED MOVEMENT
(Figures of New Orleans Cotton Exchange)

August 1 to June 14— Bales—	This Season	Last Season
Receipts at U. S. Ports	3,596,895	7,517,156
Exports to Great Britain	374,640	1,962,994
Exports to France		825,063
Exports to Continent	415,559	2,038,244
Exports to Central and South America	30,603	56,662
Exports to Orient	192,294	1,350,558
Total Exports	1,013,096	6,233,521
Total Stock in New Orleans, June 14	462,242	602,808
Stocks in U. S. Ports June 14	3,293,583	2,530,399

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What the Southern Mills Are Doing

According to reports, the King Cotton Mills Corporation, Burlington, N. C., one of the oldest manufacturing plants in Alamance County, has been purchased by the Celanese Lanese Corporation, a subsidiary corporation of Celanese Corporation of America. The plant will continue in operation under the present set-up until about the first of September, when goods in process are run out, but the sale of the plant, it is rumored, may eventually result in an expansion program, with an increase in both employment and payroll. The mill has for some years made high class specialty yarns of many different types of textile fibers and blends of fibers.

San Antonio (Tex.) Cotton Mills have re-opened after being closed for some time. Some new machinery has been installed and the mill is reported to be operating two shifts. S. L. Deane, who was with the company prior to its closing, is again superintendent.

Marshall Field & Company, Fieldale, Va., is erecting a new one-story addition to the towel mill, to cost over $100,000 with equipment. Robert & Company, Atlanta, Ga., are architects and engineers.

Erwin Cotton Mills Company, Durham, N. C., is making an addition to the bleachery that will increase production in this department by 20 per cent. It is understood that the addition will cost $11,000 to erect.

Celanese Corporation of America is reported to be planning early construction of a new branch rayon plant near Verona, Va., cost to be $1,200,000 including equipment.

Anchor Duck Mills, Rome, Ga., will build an addition 100x55 feet, two stories, with Robert & Company, Atlanta, Ga., handling the engineering and architecture.

Sherman (Tex.) Manufacturing Company has installed 5 new Whitin long draft frames, two Abbott winders and have replaced 44 old looms with modern Model X high speed looms.

Victor-Monaghan Company, Victor Plant, Greer, S. C., has consolidated the weave rooms into two rooms, and 458 Model XD looms have been installed.

Groves Thread Company, Gastonia, N. C., is reported to be modernizing the machine shop and opening room at the No. 2 Plant. Blending hoppers are being added.

Burlington Mills Corporation is constructing a one-story addition to its plant at Mooresville, N. C., cost of which, with equipment, will be around $40,000.

Baker-Lockwood Manufacturing Company, Kansas City, Mo., will build a one-story building costing approximately $90,000.

Corsicana (Tex.) Cotton Mills have installed long draft roving frames and a shearing machine.

Texas Textile Mills, Waco, Tex., have put in a Morrison Sanforizer and a Hermas shearing machine and brusher.

It is reported that Anniston (Ala.) Yarn Mills have been purchased by Southern Mills.

Patterson Textile Mill, Lenoir, N. C., has been purchased by H. S. McIntyre of Charlotte, N. C.

La Rose Bedspread Company, Dalton, Ga., has erected a new brick building.

Safety Reports

All-out production and soaring employment have not necessarily meant increased accident rates in companies which have broad, fundamental safety programs, the National Safety Council reported recently. The 1940 fatality rates of companies reporting to the Council were 2½ per cent below 1939, indicating that safety-conscious companies have been able to take employment increases in stride.

Industrial injury frequency rates averaged exactly the same, and the severity rates showed a 1 per cent drop. This is a bright spot in the picture for the nation's industry as a whole, according to Council estimates. The national occupational death toll in 1940 for all industries and occupations is estimated at 17,000—a 10 per cent increase over 1939. With total employment up 2 or 3 per cent in 1940 and manufacturing employment up 6 per cent, the national fatality rate on an exposure basis probably increased about 7 per cent.

The effect of the defense program, however, was apparent in some company records reported to the Council. But many of the industrial classifications most heavily burdened by defense activities had rate reductions. Thirteen of the 30 major industrial classifications showed decreases in frequency rates, 15 had increases and two remained unchanged.

In 17 of the 30 industries, 1940 severity rates were lower, in 12 they increased, and in one it was unchanged. In the textile industry there was a change for the better in both frequency and severity.

Textile Technologists Needed by Government

The U. S. Civil Service Commission has announced an open competitive examination to secure textile technologists for national defense work. Persons qualified may submit application. Applicants must have completed a 4-year college course with specialized major study, except that they may substitute, year for year, professional experience in the appropriate fields. In addition, applicants must have had a certain number of years of professional experience in appropriate fields, the number of years varying with the grade of technologist. The positions to be filled are in several grades, with salaries ranging from $2,600 to $5,600 a year. Competitors will not be given a written test, but will be rated upon their education and experience.

New Textile Publications

National Starch Products, Inc., 820 Greenwich St., New York City. Three folders on starch products, Fibertex, Amylex and Fiberjel.

American Social Hygiene Association, Inc., 1790 Broadway, New York City. Available without charge for distribution to employees, "Vital to National Defense", literature on syphilis and gonorrhea.

Werner G. Smith Company, Cleveland, Ohio. Literature describing Olev-ol, a product said to be used to replace olive oil for technical purposes.

Snap-On Tools Corporation, Kenosha, Wis. New catalog of tools prepared especially for use by textile plants. Separate sections are devoted to tool requirements of loom fixers, weave shops, spinning room fixers, twister room, spooler, opening and picking, card fixers and card grinders.

Calco Chemical Division of American Cyanamid Co., Bound Brook, N. J. Technical bulletin on Calcozine Black AFG, a basic dyestuff. Bulletin No. 602 "Performance Characteristics of Dye Jigs."

United States Department of Agriculture, Agricultural Marketing Service, Washington, D. C. "Tests of Irrigated and Rain-Grown American Upland Cotton, Crop of 1939".

Alemite Division, Stewart-Warner Corporation, 1826 Diversey Parkway, Chicago, Ill. Literature descriptive of the new Alemite progressive lubricating system.

Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. Folder D.D. 3175 on lint free motors between 1½ and 15 hp. for the textile industry. Bulletin B-2273 on initized light-duty metal-clad switchgear for control stations and industrial plants. Bulletin DD-4063 on ac. adjustable speed drives between one and 15 hp. for use over wide speed range. Order from Dept. 7-N-20.

Smooth-On Mfg. Co., 570 Communipaw Ave., Jersey City, N. J. Bulletin describing how to waterproof and patch concrete walls and floors.

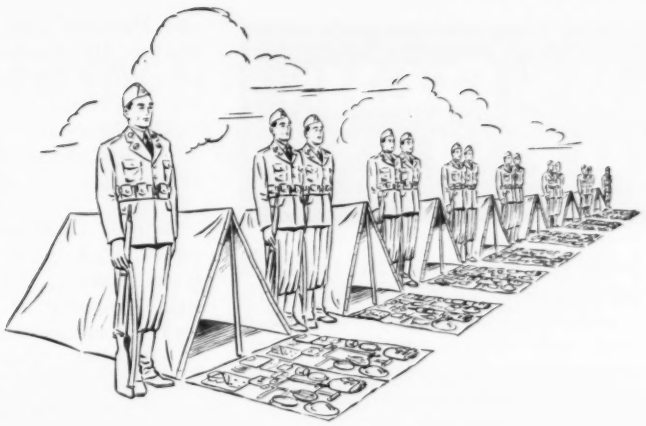
New Departure, Bristol, Conn. "New Departure Ball Bearing Shop Manual", giving approved methods for handling, mounting, and lubricating ball bearings.

B. F. Goodrich Company, Akron, Ohio. Catalog section 2150 on "Selection and Maintenance of Rubber Transmission Belts".

The Textile Foundation, Washington, D. C. Pamphlet on "A One Year Textile Course for College Graduates".

U. S. Department of Commerce, Bureau of Standards, Washington, D. C. "Woven Textile Fabrics" and their testing and reporting. Commercial standard CS59-41, which supersedes CS59-39.

Worthington Pump and Machinery Corp., Harrison, N. J. "Horizontal Duplex Plunger" power pumps, Types KLF, KKF and KMF.



Meeting the Challenge of Textiles for Defense

The Defense Program has placed on the shoulders of the Textile Industry, almost overnight, the greatest responsibility it has ever been called upon to assume.

The Government requires 219 different types of cloth—for clothing, hats, bedding and tents in staggering volume and of most extraordinary quality.

In the laboratory of the War Department Quartermaster's Depot, every fabric is literally taken apart. The wool-content, heat-retention, color fastness, ply-quality—all are exactly determined.

It is claimed that the soldiers of the new army are not only the best dressed soldiers in history, but that their equipment is far superior in quality to anything produced and sold for civilian use.

To quote General W. A. McCain, executive officer of the Department: "A soldier with a cold or grippe is no good to Uncle Sam. We are simply using scientific means to make sure that the clothing our new army wears will more than adequately protect him."

* * *

Men of the Textile Industry—You are giving a magnificent answer to the challenge of Textiles for Defense. You are producing the finest uniforms that Uncle Sam's soldiers have ever worn.

To achieve this tremendous production—without sacrificing the needs of civilian use—you are demanding the fastest equipment that the textile machinery builders can produce.

We are proud to play a part in this mighty drama of Textiles for Defense. For 121 years, we have helped to speed the production of textile necessities for the armed forces of the United States—in the Mexican War, the War between the States, the Spanish-American War, the first World War . . . Let us help you—NOW—to bigger, faster, more uniform production.

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of equipment now in use in the wet end of textile finishing cannot operate at a profit in competition with modern machines.

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TIMELY NEWS ITEMS with a TEXTILE SLANT

Nelson N. Harte, for the past several years superintendent of Merrimack Manufacturing Company, Huntsville, Ala., has accepted a position with Barnes Textile Associates, Inc., of Boston, Mass., and will make his headquarters in the southern office at 511 Johnston Building, Charlotte, N. C., of which A. B. Moss, Jr., is southern manager.

Walter L. Hunken has been appointed southern manager of sales of B. F. Sturtevant Company, Hyde Park, Boston, Mass., and will make his headquarters at 708 Guilford Building, Greensboro, N. C. He will supervise all sales activity in the southeast, including the principal district offices at Greensboro and Atlanta. Dana C. Hathaway has been appointed acting manager of the Atlanta office, succeeding H. James Waggle, who was called into the army.

Mr. Rabb

Mr. Wetzell

Mr. Owings

Mr. Breen

William L. Wetzell, Jr., textile graduate in 1938 of the North Carolina State College, Raleigh, and who has had experience in combed yarn mills and more recently was night superintendent of the Morganton (N. C.) Full-Fashioned Hosiery Company and Garrou Knitting Mills, has joined the sales force of Foster Machine Company, Westfield, Mass., making his headquarters at 509 Johnston Building, Charlotte, N. C., where he will be associated with Edward C. Connor, company representative there for some time.

Stuart W. Rabb, formerly general manager and vice-president of the Erlanger group of mills in North Carolina has become associated with W. D. Dodenhoff Company, Greenville, S. C., as general manager, with headquarters in Greenville. For the present Mr. Rabb will devote most of his efforts to the company's Check-Master, a mechanical unit which eliminates check straps on looms and which was introduced earlier this year.

Horace R. Owings, Clemson College graduate in the Class of 1933, and who has had mill experience since, has become associated with the Hubinger Company, Keokuk, Iowa, as technician on sizing problems in the company's textile service division. Mr. Owings' headquarters are at Gray Court, S. C.

Petrus W. Meyeringh has been elected a vice-president and member of the executive committee of the Hercules Powder Co., Inc. Albert E. Forster, general manager of Naval Stores Department and Luke H. Sperry, chief engineer of the company, were elected directors.

Albert R. Breen will again represent the U. S. Bobbin & Shuttle Company of Lawrence, Mass., in the Middle West, and will be located at 80 East Jackson Boulevard, Chicago, Illinois.

Employees of the Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., Passaic, N. J., unveiled a memorial to Col. Arthur Farragut Townsend, late chairman of the board of the company. The memorial was made possible by contributions of factory and office employees at the Passaic plant, and consists of a 55-foot bronze flagstaff surmounting a granite pedestal, ornamented by a bronze bas-relief of Col. Townsend.

J. R. Angel, formerly manager of the Atlanta, Ga., territory for Tolhurst Centrifugal Division of American Machine and Metals, Inc., East Moline, Ill., has been transferred to manager of the New York office, being succeeded by W. C. Davis, formerly company representative in Maryland, Virginia and District of Columbia.

Arnold, Hoffman & Co., Providence, R. I., have acquired the dextrine plant of Corn Products Refining Company at Edgewater, N. J., and the equipment has been moved to Dighton, Mass., where Arnold, Hoffman & Co. are setting up a modern dextrine manufacturing plant. This expansion will materially increase the company's output of gums and dextrines, and in addition will broaden the line to include cold water soluble dry adhesives for paper products.

Lofton H. Smith has been made assistant general manager of The Centrif-Air Machine Company, Inc., Atlanta, Ga.

V. P. Rumely has been named vice-president in charge of manufacturing for the Crane Company, Chicago, succeeding J. H. Collier, who recently was made president.

Industrial Supply Company, Clinton, S. C., has been made southern representative of Felters Co., Inc., Boston, Mass.

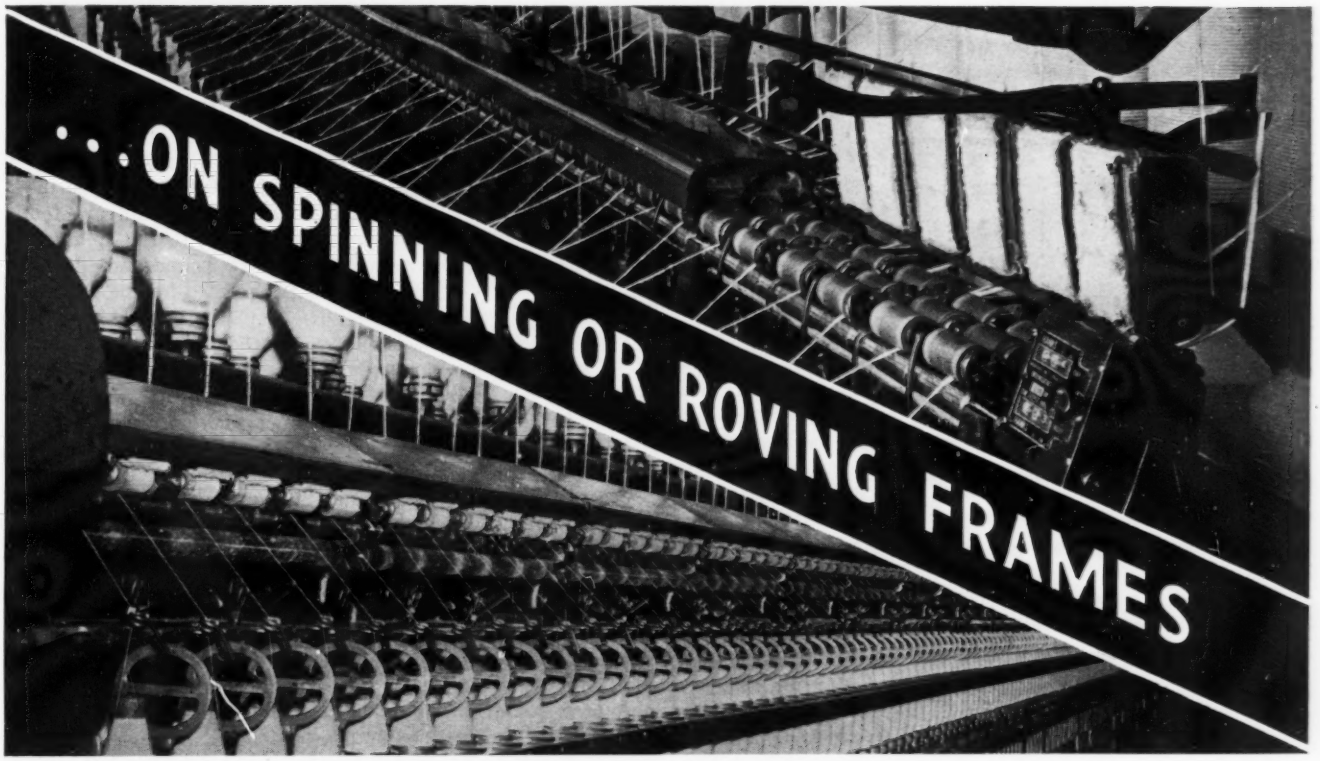
Truscon Laboratories, Detroit, Mich., manufacturers of industrial paints, waterproofing and floor hardeners, have appointed J. C. Israel, 903 S. 29th St., Birmingham, Ala., as sales representative in that territory. Mr. Israel will work under the southern office at Atlanta, Georgia.

Donald S. Collard, superintendent for a number of years in charge of manufacturing at the Warwick Chemical Company, West Warwick, R. I., has been transferred to the company's plant at Rock Hill, S. C., with the title of resident manager.

Glass-Electrode pH Indicator

Leeds & Northrup Company, 4901 Stenton Ave., Philadelphia, Pa., have placed on the market a new glass-electrode pH indicator that is said to offer as much accuracy as is needed in many laboratory measurements and in practically all plant tests, retaining the accuracy up to 85 degrees F. in atmospheres of 95 per cent relative humidity. Measurements can be made consistently within its limit of error of adjustment of plus or minus .1 pH. It is light in weight and adequately shielded.

Armstrong's Cork Cots Mean
NO EYEBROWS
at Chicopee Mills



CHICOPEE Manufacturing Corporation, of Chicopee, Georgia, have used Armstrong's Seamless Cork Cots for more than ten years. Results? Eyebrowing has been completely avoided—yarn quality stepped up—production costs kept down.

The high coefficient of friction of Armstrong's Cork Cots deposits clearer waste on the clearer board where it belongs. Since waste doesn't drop into the work, the number of slugs is reduced.

Why not let Armstrong's Cork Cots eliminate eyebrows in your mill? You'll get all the other advantages, too—less end breakage, fewer top roll laps, low-cost assembly. And remember —YOU CAN REBUFF ARMSTRONG'S CORK COTS THREE OR FOUR TIMES AT A UNIT COST OF ONLY ABOUT ½¢!

Get All the Facts

Your Armstrong representative can show you actual production figures and savings of mills spinning your range of numbers on CORK. Write Armstrong Cork Company, Textile Products Section, 923 Arch Street, Lancaster, Pa.

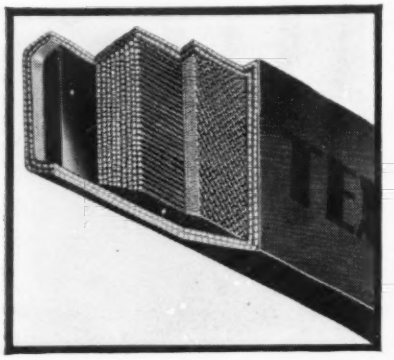
ARMSTRONG'S *Extra Cushion* SEAMLESS CORK COTS

CORK PRODUCTS SINCE 1860

NEW EQUIPMENT and MATERIALS

Improvements in V-Belt Made by Allis-Chalmers

Allis-Chalmers Mfg. Co., Milwaukee, Wis., has announced that its Texrope V-belts are now of the new Super 7 laminated design, based on the Vogt formula and field experience, to include more strength and flexibility. The



cords in the new Super 7 belts are smaller, permitting the use of more cords per belt with a resulting greater strength and less stretch, according to the manufacturer. Each cord is individually imbedded in heat dissipating rubber to reduce internal belt degeneration. They are matched in sets to assure uniform, smooth running and efficient drives.

◆

Thermoid Rubber Now Offers V-Sheaves and Pulleys

Thermoid Rubber, Division of Thermoid Company, Trenton, N. J., in addition to its line of V-belts, now offers a complete line of V-sheaves and pulleys. The company's distributors can now equip the engineer with complete drives from one-quarter to 1000 hp.

◆

Fiske Packs Lubriplate in Handy Collapsible Tube

Lubriplate Division of Fiske Brothers Refining Company, Newark, N. J., has announced that three of the company's Lubriplate lubrications are now being packed in handy collapsible tube packages, making it an economical application to a wide range of mechanical equipment, especially of the smaller size. The tube is fitted with a one-inch extended nozzle which is convenient to fit filler openings in small gear cases, ballbearings, etc. The three grades of Lubriplate put up in this type container are ballbearing Lubriplate, No. 310 for portable electric tools and No. 105 for gear cases of outboard motors to protect it against rust and corrosion.

◆

Tablet Vitamins for Textile Operatives

Walker Vitamin Products, Inc., 17 South Columbus Ave., Mt. Vernon, N. Y., has announced a new food product of special interest to industrialists. It is known as Dexaline, comes in tablet form and supplies sodium chloride, dextrose and thiamine hydrochloride, serving the purposes of counteracting effects of heat and humidity; it is said to prevent dehydration, increase blood sugar levels with consequent increase in energy, and minimize the effects of fatigue and heat exhaustion. The manufacturer suggests that the tablets be placed at drinking fountains so that operatives may take them during the day. Trial supplies are available.

◆

New DuPont Dyestuffs

E. I. duPont deNemours & Co., Inc., Wilmington, Del., has announced three new dyestuffs. Pontachrome Fast Yellow R Conc is for use as a shading color for the production of olive drab shades, khaki, tan and brown shades on wool. Polyform Bordeaux RF is a formaldehyde after-treated direct color for use as a ground shade for colored discharge work on viscose rayon and cotton. It yields a deep bluish shade of red. Pontamine Black BCN is a direct color. Fastness to light and perspiration is good. It is recommended for use on cotton materials containing acetate effect threads which need not be pure white.

◆

Clearer Board for Whitin Long-Draft Spinning

The W. D. Dodenhoff Company, Greenville, S. C., has introduced a new type patented clearer board for use on Whitin long-draft spinning. The new board incorporates a revolutionary change in design; the unusual V-shaped blocks covered with clearer cloth are the basis of the patent. Besides removing excess fly and clearer waste, this board, the company points out, is effective in producing a reduction of break-outs, work stoppages and waste, with an increase in breaking strength and uniformity of yarn.

◆

Traveling Spindle Filling Winder

Abbott Machine Company, Wilton, N. H., manufacturers of traveling spindle cone and tube winders, has recently made available an automatic traveling spindle filling winder which follows the design of the traveling spindle cone and tube winders. This new equipment was shown at the Southern Textile Exposition in Greenville last April and was described briefly in the May 1941 issue of COTTON, page 82. Further details on the filling winder are that it is fully automatic in that the supply of empty quills are dumped into the hopper directly above the machine and are fed without manual effort to the spindles, where the quills are wound and doffed, and a new quill inserted for the process to repeat itself. Each spindle has its own motor and the double throw cam gives twice the speed of stroke in one direction than the other. It also has a full-package stop motion. The circular motion of the spindles may be so regulated that a bobbin is filled when one complete circuit has been made.

◆

Progressive Lubricating System

Alemite Division, Stewart-Warner Corporation, 1826 Diversey Parkway, Chicago, Ill., has developed a progressive lubricating system that may be applied to textile machines, which permits high pressure lubrication to any number of bearings on a machine through one central point. It will deliver a predetermined quantity of lubricant to from three to 20 bearings, and when the job is completed, a readily visible indicator signals the operator. Any type of manually or power-operated high pressure grease gun can be used with the system. Features of the equipment are, all bearings in one piece of equipment can be lubricated simultaneously from one central point, inaccessible or dangerously located bearings are conveniently lubricated at will, lubrication of complete machinery is speeded and machines may be lubricated while operating.

◆

1941 Wage-Hour Manual

Bureau of National Affairs, Inc., Washington, D. C., has issued 1941 "Wage and Hour Manual", covering regulations by state and Federal governments. Price $5.00.

HUNTER

Continuous Range Cloth Carbonizing

BULLETIN CC

The Newest Advance in Carbonizing Operation Consisting of A Modern Hunter Wetting Out Tank, Acid Tank, Vacuum Extracting System and Carbonizing Dryer Operating as a Synchronized Unit with Patented Range Drive

NOT only in fulling, washing, stock and tenter drying has Hunter equipment made tremendous strides during the past few years. There is now available our new Cloth Carbonizing Unit that largely eliminates costly repairs and upkeep, enabling finishing rooms to carbonize cloth uniformly and continuously at the highest possible hourly production compatible with high quality.

This modern Hunter Unit consists of a Wetting Out Tank with a Vacuum Extracting System, an Acid Soaking Tank with a Vacuum Extracting System, Dryer and Carbonizer. With this up-to-date unit, any mill can simplify and improve its cloth carbonizing as explained in the following pages.

Supplement to Bulletin CC

HUNTER

Continuous Range Cloth Carbonizing

THE REQUIREMENTS

For Successful Piece Carbonizing

CARBONIZING of cloth in the piece has been practiced for quite a number of years; but it is an art on which very little has been written, owing perhaps to the fact that it was difficult to do successfully with the equipment then extant. In some cases, the mill man perhaps had some old machinery which he fondly would not be much loss if spoiled by the acid used in the process, or might not work and did the best he could with what he had to do with.

Colors in former days were colors and not shades such as we have today. Then there were plenty of dark colors that a piece could be put into if it was not a success as a lighter shade. But today there are advantages in piece carbonizing that more than offset the difficulties formerly experienced.

With modern equipment properly designed for piece carbonizing, the man with experience has no more trouble with the process now-a-days than with any other operation.

The more uniform the condition of the pieces going to the dye-tub every piece of their desirable results from the carbonization of the burrs that has been the goal of machine designers.

In old type equipment where goods are treated in the rope form uneven penetration in the acid bath and uneven extraction are usually possible, although we will grant that some operators can produce good results in spite of such equipment. The dryer and baker can also greatly change the appearance of acidity of the pieces. A dryer which by blowing the air laterally across the goods will remove the water quicker from the side first exposed to the air, applies across the water areas leaving concentrated acid. This applies across the water areas of the cloth will show lighter and acid from the extra acid and as the water from this solution is volatilized there. This is left in addition to the acid that was already there. The result is an increase in the acid that was already there. The other side in spite of the fact that the cloth may have entered the dryer with uniform distribution of acid entering side to side.

A cloth dries at stretches and if provision is not made in the dryer to keep out the looseness due to stretch, folds are likely to form which will cause uneven conditions of acidity.

The tenter dryer has been used to overcome some of these hazards but even this has subsequent objectionable features. One is corrosion of the pins, and another is the fact that as the goods are stretched between the pins the goods sag and the solution tends to gather at the lowest part of the sag, causing uneven areas. The goods also stretch more near the rolls and this tends to speed up the drying of the edges over the centers causing uneven acid concentrations in the pieces.

Carbonizing equipment that eliminates all these hazards to near obtainable. The goods are passed through a wetting out acid and tank in the open width and then through the acid tank in the open width in uniform manner. They are then over the goods to the acid in uniform manner. They pass over a series of rolls which permit even penetration and then the goods pass over a vacuum type of extractor through two stiff and heavy squeeze rolls still in the open width to remove the excess moisture.

The pieces then pass automatically into the dryer where they are subjected to heat blown uniformly over the whole width of the cloth, and some of the desirable features previously mentioned, none of the objectionable features previously encountered.

Patents have been granted Hunter for a device to control the uniform tension of the slack due to straightening of the goods, which eliminates the slack due to straightening of the goods, thereby overcoming folding or creasing of the goods.

The labor saving possibilities of such equipment are easily discernible, and since the cost of tank is considerably saving of is automatically returned to the tank a considerable saving of acid is evident.

In the older method concerns had to put the pieces into the acid baths, run them a while, remove and put them through squeeze rolls, back them to centrifugal extractor, which removed sheets, then open them up, fold into a truck and wheel to the dryer, where generally two men were required to feed the goods into the machine. In a modern arrangement the goods are fed into the acid bath and from then on until the goods are delivered from the baker the goods are automatically fed and controlled. Sometimes in the older method as many as three or more pieces were put through the acid bath at one time. When this is done the length of time the three pieces are in the tank is considerably less than three times as long as the time the piece would be in the tank if run singly. Under such conditions more than one piece is frequently put through the dryer at one time and if allowed to wait in a pile after extraction the unevenness of wetness in the pile, whether rough or folded, will be accentuated in the dryer, whether rough or folded, will be accentuated in the dryer, whether rough or folded, will be accentuated in the dryer

Saco-Lowell Products Announced in April "Bulletin"

Saco-Lowell Shops, 60 Batterymarch St., Boston, Mass., in the April 1941 issue of the "Bulletin" have announced several pieces of equipment that will be of interest to the textile industry. The first of these is a cam-type traverse motion to be used on spinning frames. It consists of a series of cams driven by worm wheels which mesh with a single thread worm on the end of the foot-end back roll section. The motion created by the assembly is an eccentric one with the cams developed to reduce dwell at changes of direction to an imperceptible amount. The assembly can be applied to certain existing frames. A traverse motion for roving frames is also available.

The new C-2 builder is for twisters and can be applied to existing machines of Saco-Lowell make with but a few minor changes in existing assemblies. Bobbins have been successfully made with the straight wind, Dwight, and inverted Dwight, as well as the partial taper top, with the new builder.

The Model 4 tire cord twister is said to be entirely different from any built previously by the Shops. It is a very heavy machine and for a given number of spindles will weigh approximately 20 per cent more than the heavy UC 42 twister. Head and foot ends are new in design and construction, and the spindle rail possesses unusual rigidity and strength. Spindle driving assembly consisting of cylinder and tension pulleys is new throughout and the cylinder is carried high up in the chassis close to the middle board of the creel. The "Bulletin" is profusely illustrated, showing diagrams of operation of tape drive assembly, cylinder brake, builder drive, cross shaft, etc.

◆

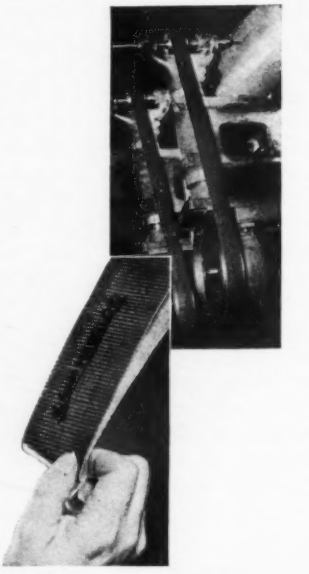
Water-Repellent Back Cloth for Printing Machines

A patent covering the use of a water-repellent back cloth for textile printing machines has been issued to E. Farnworth and George H. Wood, Jr., of the Apponaug Company, Providence, R. I., which employs a cloth treated with DuPont's "Zelan". The cloth that has been treated decreases the water-absorbing properties so that after washing it dries readily on a few drying cylinders, usually provided for drying ordinary back grays, and the back gray does not stain as readily as when untreated and good impressions in printing are produced.

◆

High Speed Belt

L. H. Gilmer Company, Tacony, Philadelphia, Pa., has made available a new endless belt for high speed precision work known as the Gilmer-Hevaloid,



which is made by a unique process of impregnating the cotton pulling element with latex. The belt is made without lap, seam or splice and is said to operate free from vibration. The non-slip surface affords a high coefficient of friction, producing practically a positive drive. Pliability for use over small pulley diameters and lightness in weight adapt it for operation at speeds to approximately 9000 f.p.m.

TRADE AUTOMATIC MARK

Manufacturers for Over Thirty Years

MODERN *Electric Propelled* INDUSTRIAL TRUCKS

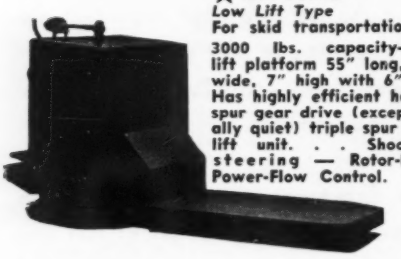
FOR ECONOMICAL MATERIALS HANDLING IN THE TEXTILE INDUSTRY

★ LIFTING

Low Lift Type

For skid transportation

3000 lbs. capacity—has lift platform 55" long, 27" wide, 7" high with 6" lift. Has highly efficient helical spur gear drive (exceptionally quiet) triple spur gear lift unit. . . Shockless steering — Rotor-Brush Power-Flow Control.

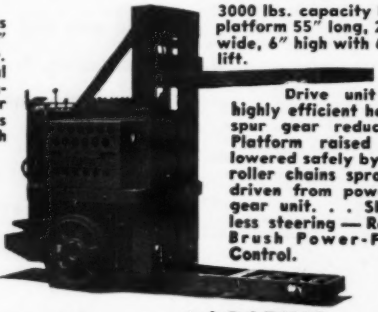


★ TIERING

High Lift Type

3000 lbs. capacity has platform 55" long, 26" wide, 6" high with 60" lift.

Drive unit has highly efficient helical spur gear reduction. Platform raised and lowered safely by two roller chains sprocket driven from powerful gear unit. . . Shockless steering — Rotor-Brush Power-Flow Control.



★ STACKING

Use your *full* vertical storage space—stack unit loads on pallets—eliminate re-handling—simplify inventory—speed up production—use the "AUTOMATIC" Fork Truck System.

Capacities 1000 and 2000 lbs.

Telescopic Lift 120" Uprights collapse to 83"

Truck is exceptionally compact, will maneuver easily in congested areas also lightweight for min. capacity elevators.

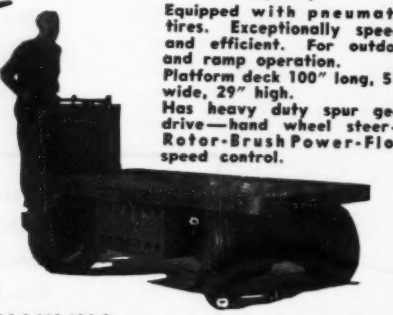
Get Full Details

★ LOADING

Platform Type

4000 lb. capacity.

Equipped with pneumatic tires. Exceptionally speedy and efficient. For outdoor and ramp operation. Platform deck 100" long, 51" wide, 29" high. Has heavy duty spur gear drive—hand wheel steer—Rotor-Brush Power-Flow speed control.



★ HAULING

For every hauling purpose. Tractor is exceptionally compact and powerful. Has 1000 lbs. Max. hauling D. B. P. Two wheel steer. Quiet drive. Rotor-Brush Power-Flow control.

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AUTOMATIC TRANSPORTATION CO.

Div. of the Yale & Towne Mfg. Co.

67 W. 87th St. CHICAGO, ILL.

Stop Oil Leaks From Comb-boxes

Ordinary oil can't prevent wear--it won't stay in comb-boxes. Cards lose adjustment quickly, due to play in bearings. Uneven sliver from cards gives you trouble right through the mill.

NON-FLUID OIL prevents wear and protects card adjustment because it stays in bearings. Dripless and waste-less, it costs you less because a smaller quantity is used at longer intervals.

Write today for free testing sample and bulletin, "Lubrication of Textile Machinery"

New York & New Jersey Lubricant Co.

Main Office: 292 Madison Ave., New York, N. Y.
Falls L. Thomason, Charlotte, N. C.
Southern Agent

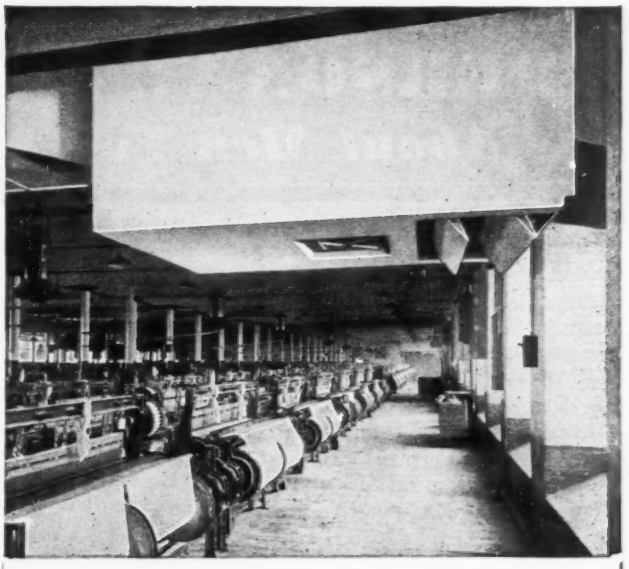
WAREHOUSES:

Charlotte, N. C. — Greenville, S. C. — Atlanta, Ga. — Providence R. I. — St. Louis, Mo. — Chicago, Ill. — Detroit, Mich.

TRADE MARK REGISTERED
NON-FLUID OIL
IN U.S. PAT. OFFICE & FOREIGN COUNTRIES

MODERN TEXTILE LUBRICANT

Better Lubrication at Less Cost per Month



Behind the Airchanger . . . AN IDEA

In developing the modern Airchanger idea for you, we started to answer the questions you textile men have been asking. Why up and down humidity? Why spotty conditions?

The Parks Automatic Airchanger measures incoming air. Admits only just so much. Just as much as constant humidity will permit — and NO MORE.

In hot weather it gives you all the evaporative cooling the humidifiers can develop. Keeps them running. Lets in as much air as possible.

On the contrary, the cooler the weather, the more the incoming air is restricted.

But all the time it is the humidity that stays put—and in all parts of the room.

It is that kind of automatic regulation that makes it an Airchanger. And only the Parks Automatic Airchanger has regulation like that.

Parks-Cramer Company

Certified Climate

Fitchburg, Mass. Boston, Mass. Charlotte, N. C.

PERSONAL NOTES
About Men You Know

B. W. WHORTON, for several years assistant superintendent of the Langdale (Ala.) Division of West Point Manufacturing Company, has been made superintendent of the Dixie Cotton Mills, LaGrange, Ga., succeeding the late ALBERT LEHMANN, JR. ROBERT REARDEN, who has been in charge of the West Point Company's research and testing laboratory at Shawmut, Ala., has succeeded Mr. Whorton at Langdale.

H. ARTHUR NEWTON has been made general superintendent of the Hampton Division, Pacific Mills, Columbia, S. C., and GERARD CHAPIN has been placed in a similar position at the company's plants in Lyman, S. C., according to announcement by C. B. Hayes, vice-president in charge of southern operations. Mr. Newton succeeds W. P. (PINK) HAMRICK who has retired after 41 years service at Columbia. J. O. CORN has resigned as superintendent of the Columbia plants. Mr. Chapin has been assistant to Mr. Hayes at Lyman for several years.

DEWITT JAVAN ROSS, senior in the textile school at Clemson College, has been presented the Honor medal by the National Association of Cotton Manufacturers. The award is made to the student making the highest scholastic record in textile engineering. Mr. Ross will become associated with the du-Pont company after graduation. WADE H. CARDER, senior in Clemson's textile school, was given the "Textile Colorist" award for outstanding work in textile chemistry and dyeing. He has accepted a position with the American Viscose Corporation.

DAVID DOWNING HAMILTON, 1941 graduate of A. French Textile School, Georgia School of Technology, Atlanta, received the medal offered by the National Association of Cotton Manufacturers for the highest scholastic average through the first term senior year. MADISON FILMORE COLE received the medal offered by the Cotton Manufacturers Association of Georgia to the student with a high scholastic average who shows a special aptitude for textile work.

J. E. DUNN, formerly overseer of weaving at the Gaudalupe Valley Cotton Mills, Cuero, Tex., is now night overseer of weaving at the Gonzales (Tex.) Cotton Mills, and D. C. STOVALL, formerly overseer of weaving at Gonzales is now overseer at the Gaudalupe Valley Cotton Mills, TED HARWOOD, formerly night superintendent at Gaudalupe now holds the same position at Gonzales.

CASH M. STANLEY, JR., graduate of Alabama Polytechnic Institute, and for the past several years assistant professor in the textile engineering department of Texas Technological College, Lubbock, Tex., has been promoted to head of this department, succeeding Roland L. Lee, Jr., who resigned to accept a position as senior cotton technologist in the cotton processing division of the Southern Regional Research Laboratory at New Orleans.

LEO CASSAVANT, formerly overseer of spooling, warping, slashing, and drawing-in at Utica (N. Y.) Cotton Mill, is now overseer at the King Philip Division of Berkshire Fine Spinning Associates, Fall River, Mass. ERNEST BOISVERT has been promoted to overseer of spinning at Plant E of this division, succeeding the late JOHN W. HOWARD.

J. DOUGLAS WOODS has been elected president of York Knitting Mills, Ltd., Toronto, Canada, succeeding his father, the late SIR JAMES WOODS. Mr. Woods formerly was vice-president and managing director. W. B. WOODS, formerly a director, has been made vice-president.

HOMER ROBERTS has resigned as superintendent of the Wetumpka, Ala., Plant of Alabama Mills Company to accept the superintendency of Eva Jane Plant of Avondale Mills, Sylacauga, Ala., succeeding M. W. PARKS, resigned

MILTON D. CRAWLEY, formerly with with Thomaston (Ga.) Cotton Mills, has become foreman on second shift of carding, spinning, spooling, twisting and winding at the No. 2 plant of Granite Falls, (N. C.) Manufacturing Company.

E. M. HENNING, formerly assistant to the late C. W. GADDY, manager and superintendent of knitting department of Wiscassett Mills Company, Albemarle, N. C., has been named to succeed Mr. Gaddy as manager. E. W. SANDERS continues as superintendent of this plant.

ERNEST SHUMAKE has resigned as general overseer of spinning and twisting at the Georgia Duck & Cordage Mill, Scottdale, Ga., to accept a position as general overseer of the mill at night of Fickett Cotton Mill, Whitehall, Ga.

J. E. STONE, who has been overseer of spinning and twisting at the Aragon-Baldwin Company's Whitmire, S. C., plant, now holds the same position with the company's mill at Rock Hill. S. C.

CHARLES E. MASON, for sometime sales representative for Joseph Sykes Bros., card clothing manufacturers, has resigned to become superintendent of machinery maintenance at Bibb Manufacturing Company, Macon, Ga.

J. L. BRANNAN, for sometime connected with the Hermitage Cotton Mills, Camden, S. C., is now associated with Panola Mills Company, Greenwood, S. C., in charge of preparatory processing on spun rayon.

R. E. MACCAUSLAND, field manager of Barber-Colman Company, Rockford, Ill., has retired after a connection of 36 years with the firm, and is residing in McAllen, Texas.

WADE HEARN has recently been promoted to assistant to the superintendent of Edna Mills Corporation, Reidsville, N. C.

JOHN W. GEARY, JR., formerly a partner in George H. McFadden & Bro., cotton merchants, has joined the rayon staple fiber sales department of American Viscose Corporation.

J. N. EDENS, SR., has been elected president of the Corsicana (Tex.) Cotton Mills, succeeding the late R. L. HAMILTON.

ROBERT A. TURNER, Fairlawn, N. J., has been made general director of recreation at the mills of the West Point (Ga.) Manufacturing Company.

Obituary

STANLEY WARZALA, supervisor of safety for the Calco Chemical Division of American Cyanamid Company, passed away after a brief illness June 9. He had recently been appointed special agent of Department of Labor to promote safety and industrial health in the New Jersey defense industries.

GEORGE P. RAY, retired vice-president an general sales manager of Riverside & Dan River Cotton Mills, Danville, Va. passed away May 22 following an operation.

ROY L. JONES of Millington, N. J., an executive of the Calco Chemical Division of American Cyanamid Company, passed away June 12.

BARBER-COLMAN SYSTEM OF SPOOLING AND WARPING

Operation of Barber-Colman Automatic Spoolers Requires a

MINIMUM of EFFORT

Convenience to the operator is of great importance when it comes to achieving and maintaining efficient production. "Efficiency" means greatest results with the least effort. The design of Barber-Colman Automatic Spoolers is such that only the simplest and easiest motions are required, resulting in a maximum of production with a minimum of fatigue.

BARBER-COLMAN COMPANY

ROCKFORD, ILLINOIS, U. S. A.

FRAMINGHAM, MASS., U. S. A. • GREENVILLE, S. C., U. S. A. • MANCHESTER, ENGLAND • MUNICH, GERMANY

. . . and STALEY STARCHES
Have "What It Takes"

★ Long experience, modern laboratories, experienced personnel and watchful control are necessary to produce the *right* starch for each specific textile use — and keep it uniformly *right* in GRADE, and uniformly *high* in QUALITY. That's why Staley Starches "have what it takes". Depend upon Staley cooperation and service for your starch needs.

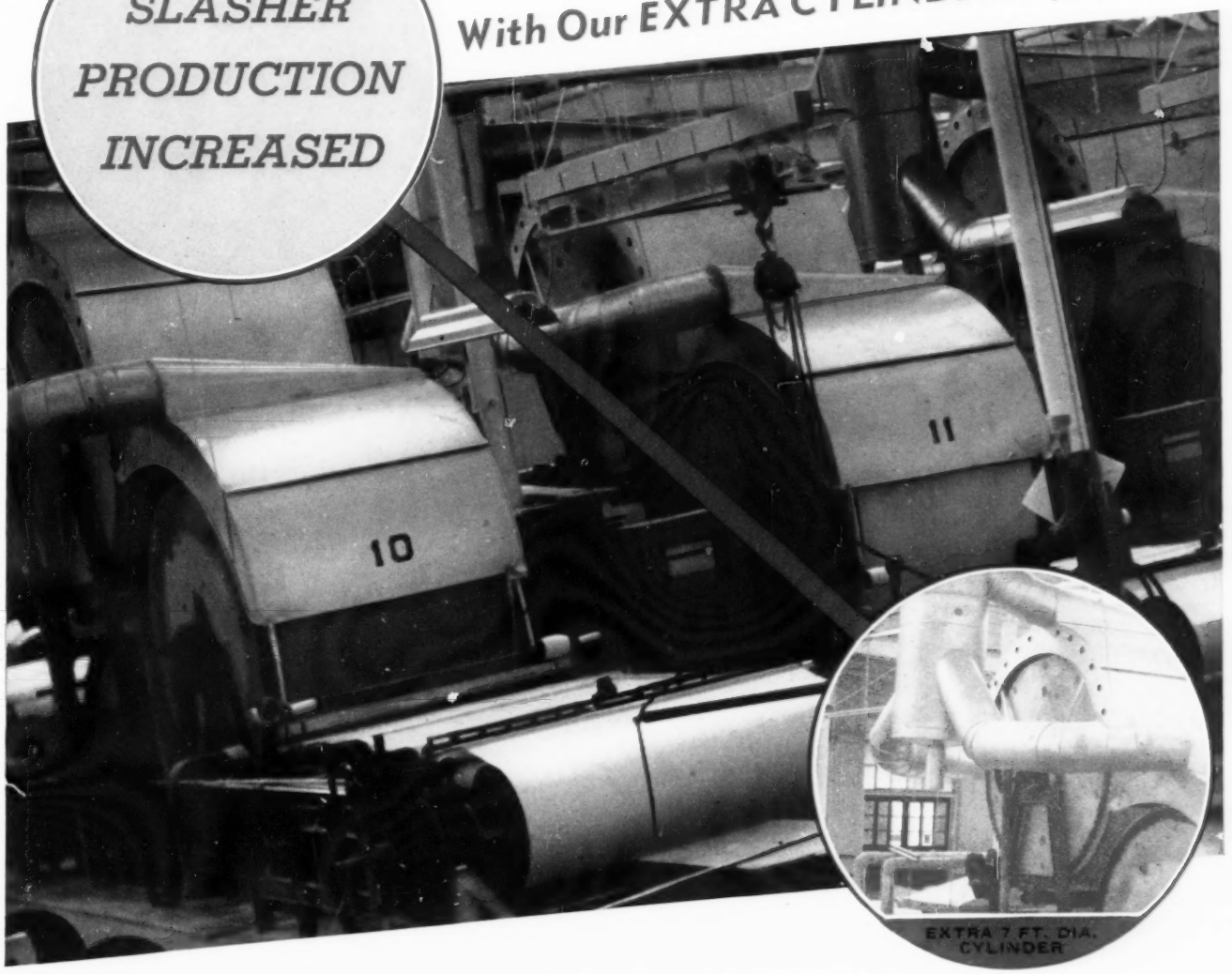
A. E. STALEY MFG. CO.

Decatur, Ill.

Atlanta Philadelphia Dallas New York Spartanburg San Francisco Chicago Boston

SLASHER PRODUCTION INCREASED

With Our EXTRA CYLINDER Equipment



These slashers are equipped with our extra 7-ft. diameter cylinder equipment. Production has been increased over 50%.

Why be satisfied with your present slasher production when it can be greatly increased with our modern slasher equipment without extra labor expense. The number of slashers can be reduced.

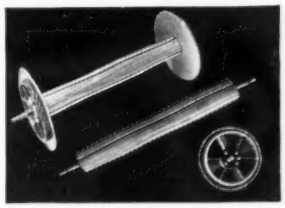
Contact rolls and positive self-releasing gear drive provides efficient use of drying surface without excessive strain on the yarn. Elasticity of the yarn is retained, helping to improve weaving efficiency.

Ball bearing equipment can be installed throughout your slasher to provide smooth operation at the increased speeds.

Present equipment is utilized as far as possible, thereby keeping the cost at a minimum. We can give you increased production at nominal cost.

Let our representative help you with your slasher problems—without obligation.

Other QUALITY Products



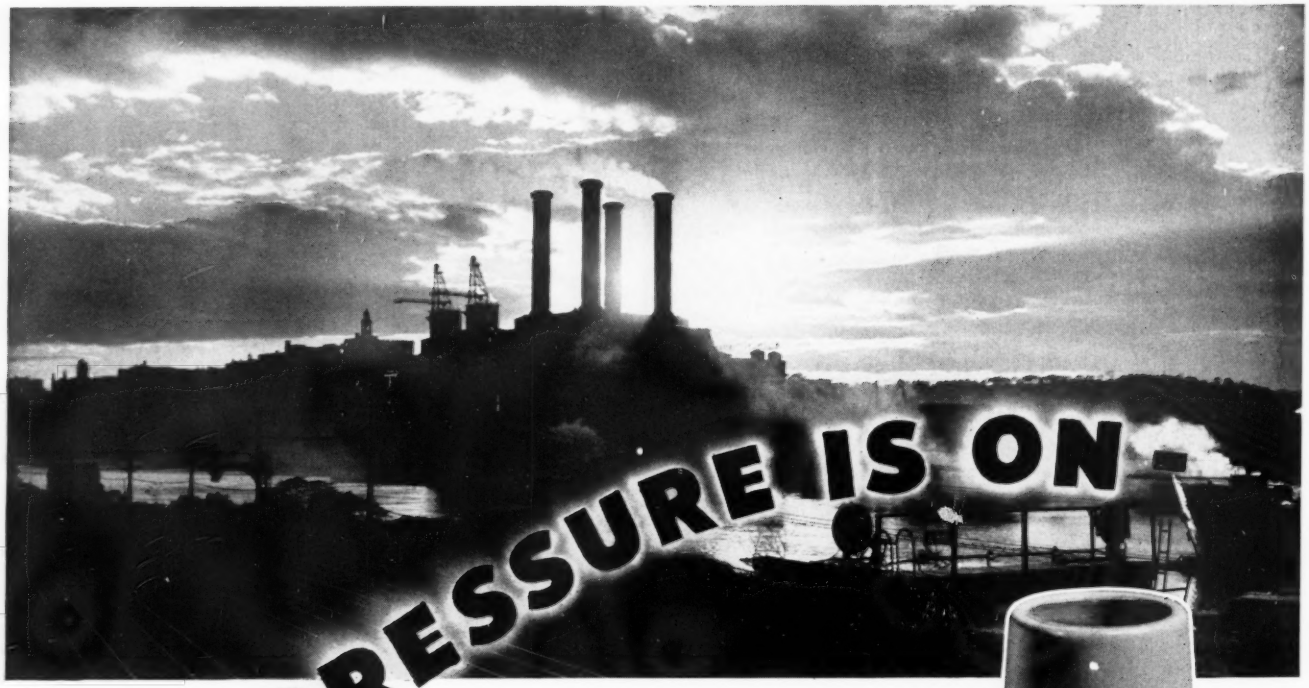
LOOM BEAMS . . . West Point loom beams and beam heads are superior in their operation and economy.

GEARS . . . Gears of all types — noted for their efficiency and durability.

WEST POINT FOUNDRY & MACHINE CO.

(Batson-Cook Company, Owners)

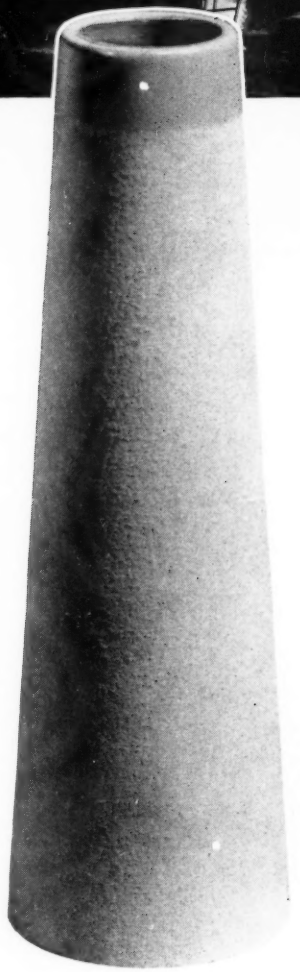
WEST POINT, GEORGIA



All over America, lights are coming on at night . . . that darkened areas over the rest of the world may come to light again. Democracy is not going to fail by default.

"The pressure is on"— on American Industry and everyone connected with it.

As an important cog in the manufacture of textiles, Sonoco is keeping in step with every changing phase of development, production and service.

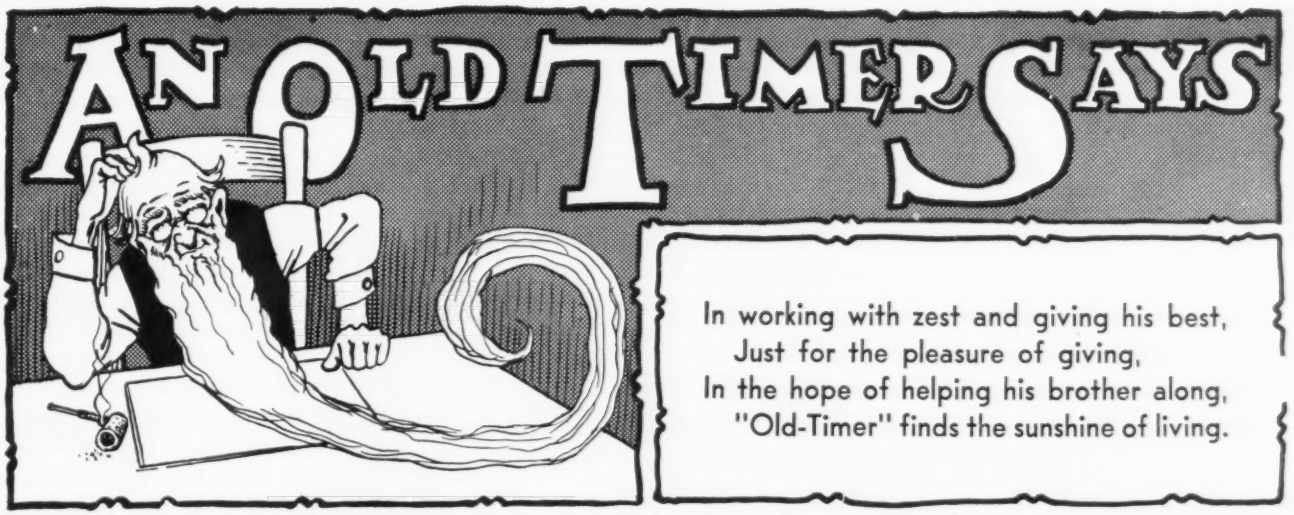


SONOCO MAKES *EVERYTHING* IN *PAPER CARRIERS*

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. | HARTSVILLE S. C. | MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Another Conversation about Several Things

(Continued from the June Issue)

(This continues the philosophical discussion by OLD-TIMER *and* JIM *which started in the June issue, on page* 115. *You should read that installment, which will bring you logically into this one.)*

(Since this article is written in conversational style, it should be borne in mind that those paragraphs in regular type represent OLD-TIMER's part in the conversation, while those in *italics* represent JIM's part.)

One thing I will say, JIM, and that is I do not believe there has ever been a time in textile history when there was such a wonderful opportunity for both the young textile student and the older experienced overseer and superintendent. And where it is possible to get those two to working together—to dreaming together—or to get their imaginations to working together, whatever way you care to express it—then again, I say, look out, Jules Verne, they'll make you look like a piker.

In linking these two types of minds together—that is, the young textile student and the older experienced overseer or superintendent—my idea, JIM, is prompted by the fact that some large organizations, meaning large chains of mills, seem to have gone somewhat beyond the practical limit, so to speak, in employing all young men, shall I say practically all young men of *in*experience and dropping all their older men who do have that unpredictable asset of experience. This leaves their organization as "lop-sided" and as unbalanced as it was before, and in quite a few instances I have heard of, to the detriment of the manufacturing efficiency of their plants.

After all, a plant must be kept operating, must keep its production up to maximum efficiency, if it is going to make money, and there is where the older man, the man of experience, earns his salary.

Some of these days some smart guy is going to work out a practical system whereby his firm will get the benefit of the combined brains of the young textile student and the older experienced overseer and superintendent—and then watch the fur fly, as the old saying goes.

Are you going to sleep, JIM?

No, no, OLD-TIMER*! Go right ahead, I only closed my eyes because I can listen better that way.*

Yes, I know, and you can snore better that way too. Anyway, when you start snoring, I'll know to stop.

As I was saying, JIM, or as I was about to say, most of us fellows get into the habit of letting the other fellow think for us. We deprive ourselves of valuable worth by getting too darned lazy to think for ourselves. After all, as we tried to show one time in quite a lengthy conversation, thinking is about the hardest work a man can do, and we believe the best proof of that contention is that so few people ever do any real honest-to-goodness constructive thinking. For example, our opinions are usually formed for us. That is, we usually fall in line with so-called public opinion. Opinion which is a composite of mass opinion. We do not have to follow public opinion but it is the road of least resistance and like floating down stream, we drift along with the crowd because it requires effort to battle the up-stream. Change the word opinion for the word "think" and you have the same analogy. When a man makes up his mind to work out an idea that has popped into his mind, as most ideas do, when he is able not only to concentrate on that idea, but begin a system of research to find out whether the idea has practical value or is merely a flash of imagination or not—then he is working, working in a way which is just as sure to bring results as death and taxes, whether with the present idea he is concentrating on or another idea which may and will grow out of that one, provided he keeps at it.

Sure, OLD-TIMER, *that sounds to me somewhat like your explanation of character. Remember when you explained to me at the mention of the word character most people's minds at once begin to think of whether the man is honest, whether he attends church and whether he is moral or not. Well, some of the dope you have just handed out could come under the broad meaning of character, couldn't it?*

Exactly, JIM. In fact, I've just read one of Sinclair Lewis' books, a best-seller when it first came out, which is a depiction of character, or characters

I should say, throughout the entire narrative. Let me say in passing that unless Sinclair Lewis has studied medicine it is hard to realize that a professional writer could acquire such a wide and accurate knowledge of a profession which he so thoroughly explains in detail in his book "Arrowsmith". Also, he describes characters in that book which not only show his keen insight into human nature, but also his sound judgment in regard to practical business problems as they may be successfully applied to business today, although the story of Dr. Arrowsmith was laid at its start in a small western town a number of years ago.

It is significant that in reading history or fiction of today or of a hundred years ago, you will find so much reasoning, so much explanation of the intricate workings of human nature, that you can and I can apply to our business or our jobs of today, matters not what kind of business or job we have. Does this fact not seem to thoroughly convince us that the fundamentals of business, the basic facts of reasoning and of human nature, are the same now that they were 100 years ago?

Oh, of course the changing of customs of the people, the changing of our habits, our living conditions, etc., to meet and keep pace with modern inventions and modern science does affect the detail, so to speak, of the application of our ideas concerning business and human nature and our general approach to all our relations with human beings, but the fundamentals—the basic facts—the sound reasoning of management—the foundation of that ever-mysterious and at the same time simple problem of solving and using the laws of nature, have never, so far as history teaches us, changed.

As a concrete example, look up your back numbers of COTTON and read again the OLD-TIMER series of articles based on "Pilgrim's Progress". "Pilgrim's Progress" was written more than a hundred years ago by a man who if he were living today would make an outstanding manager of any business, large group of textile plants, or any other business where relations with operatives is a major problem.

(Note: Any readers of this page who did not read that series of articles when they were published should by all means read them today and those of you who did read them would certainly get some profitable ideas concerning your problems of management either as an overseer, superintendent, or manager if you will read them again. The series appeared on the OLD-TIMER page under the title "Imagination and Progress" in the August, September, October, November and December 1939 issues of COTTON.)

Max Gottlieb, one of Sinclair Lewis' characters, was a scientist, and expert in his line but absolutely impracticable, so much so that he had no friends except his protege, Arrowsmith. He could not take business advantage of enough of his great discoveries to become wealthy, which could have been easily done. As an interne and afterwards as a successful doctor, Arrowsmith worshiped Gottlieb because he realized he was such a genius in research work. Also Gottlieb oftentimes, though in a jesting manner, spoke parables—parables that might be applied to practical things.

Dr. Tubs, who was director of the institute Sinclair Lewis describes, a position which is similar to manufacturing manager or agent of a cotton mill, was a man rather hard to analyze so far as his management was concerned. It was somewhat difficult to see how the institute could be well managed by such a man as he, but it was. During a conversation between Scientist Gottlieb and Dr. Arrowsmith, Gottlieb made this statement about Dr. Tubs' management of the institute—that it was difficult to reason how the pretentiousness and fussy unimaginativeness of such a man as Tubs could make a good manager, while the genius of a Gottlieb should make such a poor one; the jest that the one thing worse than a too-managed and standardized institution should be one that was not managed or standardized at all.

How well does such a jest or reasoning apply to the management of many cotton mills and the personal management of many overseers and superintendents of themselves—that is, I mean management of their personalities as men who must sell themselves, must sell their brains to the man or men who buy brains to manage business. This, I'll admit, is a very delicate subject but we may as well lay the cards on the table and face the facts.

What in heck does a man go to school and to college for unless, we admit frankly, it is for the purpost of selling the knowledge gained to the highest bidder? There are exceptions to this rule, of course. Sinclair Lewis gives such an exception admirably in his book, but the overwhelming majority of people try to obtain knowledge in order to sell it for dollars. Even if that is a rather blunt way to say it, the cold facts are that it is true, therefore, we may as well make the most of it. We can and realize that knowledge is the most valuable asset a human being can acquire if a man has the business ability to sell it to the man or firm which has the dollars.

To do this most successfully, knowledge must be coupled with personality and business judgment. How well do we all know of the many outstanding examples of men who have knowledge but lack business ability to sell it and see men of more business ability take that knowledge and make a fortune out of it.

To paraphrase: "All credit to the men who invented paints and canvas, but there is more credit to the Raphaels, Holbeins and Rembrandts who used those discoveries."

And the simile may be carried on to more modern times of the Westinghouse, Edison era. Knowledge is power—that is true. It has always been true and will always be true, but Old Man Human Nature comes along and says that "Strength will not remain with you unless it is used". Neither will knowledge, my friend, and you can add to that, that knowledge will not bring you dollars unless mixed copiously with business judgment and personality.

Let up, OLD-TIMER, *and let some of this soak in. You have said so many things in this conversation which a fellow can profit by in his work that I am all mixed up and I think I'll cut it out of* COTTON *and carry it in my pocket so I can look at one thought at a time and think about it to see if I can fit it into my way of thinking and into the better management of my job.*

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HOW OTHER MEN MANAGE

Some Ways to Prevent Slipping Frictions

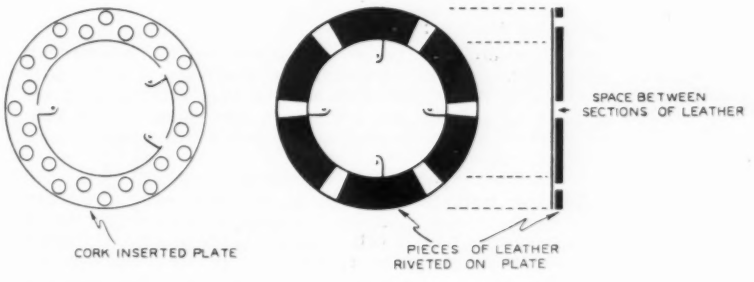
WE INVITE our readers to make use of this department for the discussion of any and all problems arising in the mill or finishing plant. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing.

EDITOR COTTON:

I have read with interest the article "Slipping Frictions" on page 109 of the April 1941 issue of COTTON, prepared from the opinions given by five mill men, and I should like to add my own thoughts and experiences to what has been said.

There are several reasons for slipping frictions—and several remedies. From the nature of the question, it seems the mill has looms equipped with friction plates. Under certain conditions and with certain minor repairs, even the older-type leather face friction plates can be listed as "of the best'.'

First, let us look into the causes of lost friction. Too much oil; to little oil; worn parts and misadjusted parts. If too much oil is used, it feeds to the high spots through centrifugal action and soon covers the large motor drive gear. Thus when the power is applied, the oil is fed off the gear face onto the friction face and is absorbed into the leather or cork.



If too little oil is used, the parts become worn—especially the swivel—losing friction, and after adjusting the worn parts it will often be found that poor adjustments account for further lost friction. A misadjusted motor gear with a worn hub or placed onto a worn shaft; having a "wobbly" movement, will soon ruin the friction. Gears must run true. When the shipping lever is thrown off, forcing the large gear outwards, between 1/4 to 5/16-inch clearance should be noticeable between the gear face and the friction plate face.

Another reason for lost friction and which is often overlooked, is collection of lint or yarns clogging up the parts connected thereto. Discounting this source of trouble, friction adjustments should last for years if the necessary oil is applied properly.

Temporary Repairs to Friction

At times a fixer is busy and slow running looms cannot be torn down for friction repairs. At other times, when warps are mounted and near run-outs, it is advisable to keep the loom in operation so as to make the repair when the loom is empty. At other times it is advisable to keep the loom running until the week-end to make the required repair. In order to keep the loom running temporarily, make as good an adjustment as possible, then slip a "half-moon" of sandpaper between the friction and gear, with the grit surface towards the steel face.

A second method is to slip about half-handful of fuller's earth between the two faces while the loom is idle so the oil will be absorbed. Under no condition should the friction be so tight it will "lift" the weaver off his feet when he applies the power. This is bad fixing.

Permanent Repairs

At our plant we use the cork-insert friction rings which can be riveted onto the friction plate. On this type, the corks are securely fastened onto a fiber ring, and their cost is sufficiently low enough to make installation worthwhile. Be careful in riveting so no corks are broken; if necessary, drill new holes through the plate, one at a time, so as to place the rivets between corks.

Where cork-inserted steel plates are already in use, new corks can be replaced to better advantage if they have been soaked previously in water. On this type, it is a wise plan to keep corks soaking in a bucket or tub of water months before required use. When using trim the smaller diameter to fit into the hole, and a sharp blow from a hammer will sink the cork into the hole tight enough to prevent loosening.

On cork frictions, if frictions are not too tight, renewals will not be necessary for years. They give satisfactory service where oil is used excessively, and about the worst damage encountered will be from a "wobbly" motor gear.

One other interesting method that is practically unknown, is the use of leather in sections as shown in the sketch. The old leather can be removed or cut out and pieces of belting riveted into place. I have not found this as satisfactory as the cork-insert, but it is far superior to the full-face leather surface in my opinion.

CONTRIBUTOR NO. 7236

Width of Sliver Guides in Drawing

EDITOR COTTON:

I read with interest the article "Width of Sliver Guides for Drawing Frames" on page 104 of the January 1941 issue of COTTON, in which your "CONTRIBUTOR No. 7153" gives two schools of thought on the subject, and I would like to make a few comments also.

To begin with, the sliver guide should certainly vary with the size of the card sliver, having a wider guide for the heavier sliver. This guide should be wide enough so the slivers will not have a tendency to ride on each other as this will cause uneven drafting.

At one mill where I worked we bought a sliver tester and had the laboratory man test every machine in the card room. While testing the drawing frames we found one machine making much more even work than the others so we investigated to find out why. The only difference we could find was in the sliver guides.

On the machine making the more even sliver we did not have the semi-circular guide, but simply two straight guides about 5 inches apart. We also noticed that on the machines where we had the semi-circular guides that the slivers had a tendency to ride on top of each other, especially the outside slivers.

We tried another frame with the straight guides and the drawing improved at once so we tried the same thing on all our drawing frames and when we checked again there was practically no difference. This change was effected very easily as all we had to do was take the semi-circular guides off, saw out the middle portion, leaving about one-half inch uprights, polish these uprights and put them back on the frame.

CONTRIBUTOR No. 7238

How to Avoid Double-Carding

EDITOR COTTON:

We make all kinds of heathers, blends, mixes and oxfords for the knitting trade and we have always found it necessary to double-card such mixes, not only on account of the blending of the colors, but also on account of neps and other small undyed particles, which, if the stock is not double-carded, stand out like a sore thumb with the dyed stock for a background. By double-carding we are able to eliminate most of these.

Double-carding cuts production and plays havoc with the cost figures. *Do any of your readers know a way to remove these neps on the first carding, or is there some attachment or some way to process the cotton so that we shall not have to double-card and still get double-carded results?*

Our manufacturing specifications follow:

On our heathers, oxfords, and blends the yarn numbers range from 8s to 20s with an average number of 12s. This is hosiery yarn and we use from 3.00 to 3.25 times the square root as twist multiple for our yarns. On our cards the speeds and settings are:

R.P.M. of licker-in	425
R.P.M. of cylinder	165
R.P.M. of doffer	9
The settings are as follows:	
Doffer to cylinder	7
Flats to cylinder	10
Feed plate to licker-in	10
Top mote knife to licker-in	7
Bottom mote knife to licker-in	7
Front plate to cylinder top	29
Back plate to cylinder top	17
Back plate to cylinder bottom	29
Doffer comb to doffer	22
Licker-in to cylinder	7
Cylinder screen to cylinder front	14
Cylinder screen to cylinder center	29
Cylinder screen to cylinder back	17
Licker-in screen to licker-in	12

We are running a 12.75-ounce lap and carding 10 pounds per hour.

These heathers run from 5 per cent white up to 40 per cent white with the rest colored stock. We make a floor mix and our chief trouble is the amount of neps we get.

CONTRIBUTOR No. 7232

Placing Drafting Roll Weights

EDITOR COTTON:

I would like to get some information concerning the arrangement of weights in drafting. I refer particularly to the arrangement of the weights used on drawing frames, but I also am interested in this subject as it concerns placing the weights on combers and fly frames.

Many experienced overseers contend that the heavier weights should be on the back and the lighter weights on the front, with a gradual stepping down in between. On the other hand, makers of machinery seem to want the heavy weights on the front and the light weights on the back, with the other weights graduated in between.

My personal opinion is that the heavy weights should be used on the front, where more drafting takes place, but I know there are some good mill men that take the other side, and I would appreciate having some of these men who have actually run some experiments, let us know what they found out following their experiments.

CONTRIBUTOR No. 7176

Several answers and opinions on the subject have been given by mill men, and these are contained in the following article. They show a cross-section of practice in placing of roll weights on drafting machines.

Answer 1. In reply to "CONTRIBUTOR No. 7176" I will say that the placing of roll weights is another of those mill problems on which there are two schools of thought, one of which is directly opposite to the other, yet both seem to work well in practice, and both methods are in use today.

There has always been difference of opinion as to whether the heavier weights should be on the back roll of a drawing frame, graduating to the

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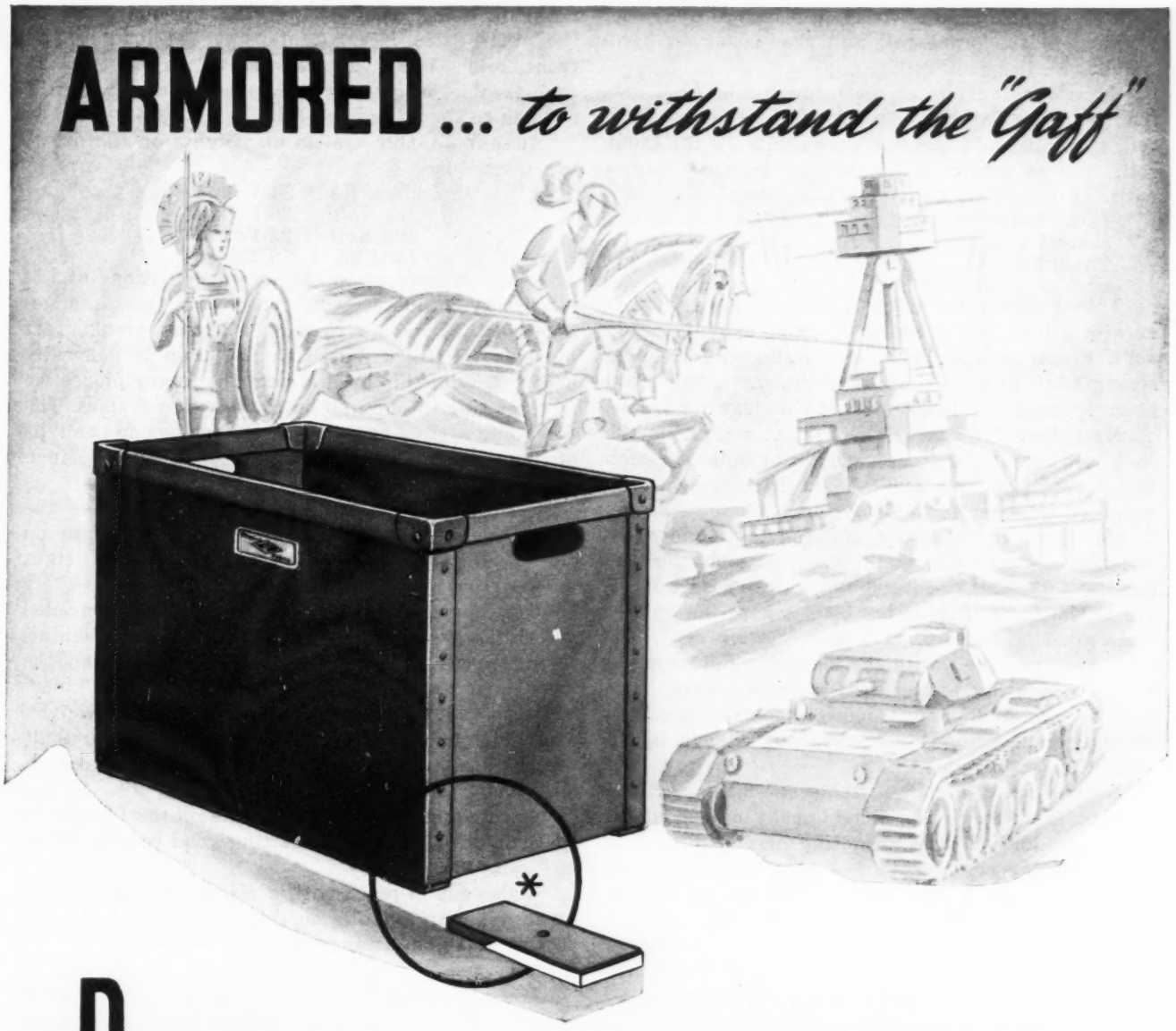

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lighter weight on the front roll; or the heavier weights on the front roll and graduating to light weights on the back roll.

Some drawing frames are being run on each system, but I prefer the heavier weights on the back roll, graduating to the lighter weights on the front roll. At the present I am running drawing frames with the following weight arrangement:

Front Roll	14 Pounds
Second Roll	14 Pounds
Third Roll	16 Pounds
Back Roll	18 Pounds

This is on approximately a 55-grain drawing sliver with a front roll speed of 315 rpm, using cork top rolls. From the standpoint of spinning and breaking strength this weighting arrangement gives good running work and looks good at the drawing frame.

My reason for having the heavier weight on the back roll is that the greater weight or bulk of cotton is at the back roll and should be more heavily weighted in order to facilitate drafting towards the front. Even though more drafting takes place between the front rolls, there is not so much bulk to handle, and therefore it should require less weighting at the front than at the back, where the bulkier stock must be held.

I have run tests with the heavier weights on the front, graduating to the light weights on the back, but did not find enough improvement in breaking strength or ends-down to warrant a change in the weighting arrangement.

Bear in mind that this is only one man's test and I think the contributor should make a test in his own plant and use the weighting arrangement that gives him the best results. A plan may work well in one mill and be "all wet" in another, so my advice is for each mill to run a test under its own local conditions.

Answer 2. In regard to the query of "CONTRIBUTOR NO. 7176" with reference to placing of roller weights, I am able to say that we tried a rearrangement of weights on metallic roll drawing frames sometime ago but could find no reason that would justify a permanent change. We did this on an experimental section and followed it through to the finished yarn. Since then we have changed our drawing to cork top rolls. The old and new weights used are as follows:

Roll	Metallic	Cork
Front	28 Lbs.	38 Lbs.
Second	32 Lbs.	42 Lbs.
Third	28 Lbs.	38 Lbs.
Back	36 Lbs.	46 Lbs.
Sliver	72 Grns.	65 Grns.

On 10 x 5 roving frames making .70 h. r. and .90 h. r. we are using spring tension rather than direct weighting. On the front rolls the pressure is 22 pounds, and on the middle and back rolls there is a pressure of 24 pounds on each.

The spring tension exerted on the 8 x 3½ frames making 3.25 and 4.25 h. r. is 26 pounds on each of the three rolls. Results from these pressures have been very good and we have made no change since the installation was made.

Personally, the idea of using a heavier front roll weight doesn't suit me so well. I have run into a number of crooked steel rolls as well as worn roll necks in using ordinary weights without going to the other extreme and increasing the load on the front roll. While extra weights may not cause such trouble on its own account, they certainly will not add to the life of the roll.

Answer 3. Our system of weights on the drawing frames is:

Back Roll	24 Pounds
3rd Roll	20 Pounds
2nd Roll	22 Pounds
1st Roll	20 Pounds

This is just reverse to the recommendations of the machinery builders. Our reason for this arrangement is that we are running a higher break draft between the third and back roll than is generally used. We did this to eliminate the lumpy places we were getting in our web on the drawing frames. The foregoing system has proved satisfactory on the type of work which we are on, since our stock is ⅞-inch Middling.

The weights on our roving frames are as the manufacturer recommends, the 18-pound weight on the middle and back roll and the 16-pound weight on the front roll.

Our contention is the most weight is needed where the greatest bulk is coming into the machine.

Answer 4. We run our heavy weights on the back. We do this because we feel that the bulkiness of stock that is fed in requires the heavier weight. Our rolls on drawing are metallic and on the fly frames are cork and leather. We have no combers.

I discussed this question with a mill close by and they are using the heavier weights on the front rolls of their drawing and are getting good results. Their top rolls are cork.

I also got in touch with a machinery manufacturer to get their opinion on this subject, and the following is the substance of their remarks:

"On metallic rolls we weight 28, 28, 36 and 36 with the heaviest weight on the back. This is in order to make sure that the collars touch and impart positive drive to the top roll. On the common roll we have our heaviest weight in front, 44, 36 on the second, 36 on the third and 36 on the fourth. When we use ball bearing rolls we use the same weight on all four lines, 36 pounds.

"Some of the English systems use very much more weight. For example, specifications on some drawing going to China to be used in conjunction with China cotton on the English system with small rolls (1 1/16-inch, 15/16-inch, 1 1/16-inch and 1 1/16-inch) call for 40 pounds weight on the front line, 44 on the second, 40 on the third and 40 on the fourth.

"Any mill could probably improve the results by intensive study of proper weighting but we have found that over the years we have gotten very satisfactory results as regards evenness.

"With regard to the weights used on fly frames and spinning, we have found by experimenting that the least amount of weight that will give us positive drafting is best; that is, with the rolls set 1/16-inch over the longest staple, weight enough to allow the machine to draft positively. On our new types of frames this has been worked out intensively. On our older frames, where the loads were not so great and requirements not so particular, it was more or

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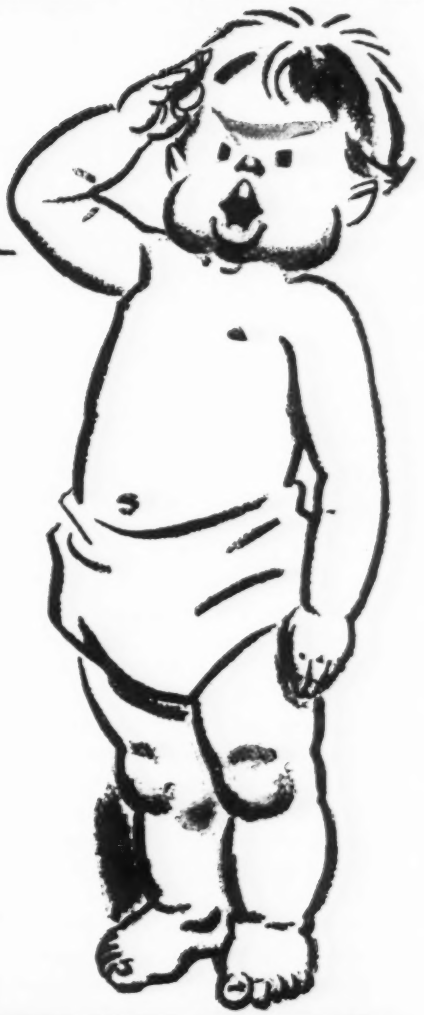

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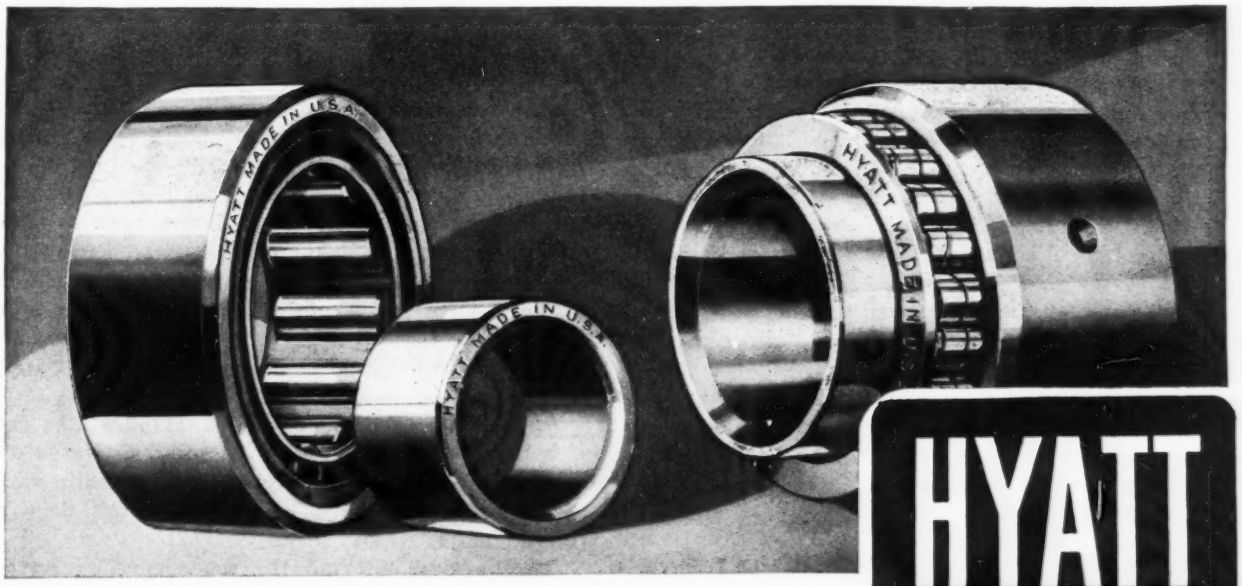

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QUIET

less approximate weighting and setting, but today our weighting has been arrived at in a scientific way. In any case, it has to be governed by the speed of the rolls, the draft and the bulk; that is, with less speed, less draft and less bulk, closer setting of a roll can be had. These settings have to be varied to some degree according to the foregoing, with additional consideration of the harshness of the cotton being used."

Answer 5. The question of whether to run the heavier weights to the front or to the back on drawing frames seems to be an age-old question among mill men and seems to be just as controversial a question today as ever.

Some machinery manufacturers today specify the heavier weights to go on the front, the lighter weights to go on the back. However, it is my understanding that they will very readily change their specifications along these lines if it conflicts with the customers' ideas or wishes.

The main argument for having the weights heavier at the back is that the amount of material going through these rolls is heavier and necessitates more weight to allow a firm grip on the fibers. It is true that, although the speeds are slow on the back rolls and the draft is very short, any slippage of fibers at this point will cause lumpy work.

The argument for having the heavy weights to the front are that even though there is not as much material to be gripped by the rolls at any one time, the speeds are much higher and the draft much longer, necessitating more weights to get the same grip on the fibers as could be had with less weight on the back. Any slippage of the fibers on the front would certainly cause lumpy work as well as bad running drawing.

Having presented both sides of the argument covering this matter, we may proceed to draw a few conclusions. First, there seems to be little to choose from when one considers the forcefulness with which textile men present their arguments, both pro and con, and when one takes into consideration the experience that men have had who will take either side of the argument.

I have seen results of comparative yarn break tests that have been made of drawing with the weights both ways and there was a difference of only 1½ per cent between the breaks, this difference being in favor of the heavy weights in front. Second, and I'm only guessing on this, I think that we should probably arrive at whatever weight is most suitable and apply that weight to all four rolls.

The arguments given in the foregoing are that heavy weights should, in one case, be on the front, and in the other case should be on the back. Why not use the heaviest weights as a standard and put that much weight on each roll?

Answer 6. We have made a number of tests on drawing and have found that where the same type top roll is used on all lines, better results are obtained when using more weight on the back lines. Originally our drawing frames were equipped with steel fluted top rolls on all four lines and these frames had more weight on the back lines than on the front.

Before changing over all of our drawing to Koroseal top rolls, we made a number of tests on the different weight distributions and we found that if all four top lines were changed from steel to Koroseal we would still need the greater weight on the back lines. I think the greater weight is required on the back lines due to the greater bulk and to the fact that the first draft naturally takes place between the back and third line of rolls.

On fly frames we have the larger weight on the front line of rolls. This has always given us satisfactory results. It is possible that revising this might do some good, but we have as yet run only limited tests on this, which tend to corroborate the fact that more weight is needed on the front lines.

Answer 7. We ran the following sliver test showing light and heavy weights run on front rollers of our drawing frames. We have run several tests and they all showed that there is no difference as we could tell, though we are running heavy weights on our front rollers. We have not made any test on our roving frames, but have heavier weights on the front than on the back rollers.

TESTED ON SACO-LOWELL SLIVER TESTER
ALL TOP CORK ROLLERS

No. 14 Frame		No. 14 Frame	
Roll	**Weight**	**Roll**	**Weight**
1st	24 Lbs	1st	20 Lbs
2nd	22 Lbs	2nd	20 Lbs
3rd	20 Lbs	3rd	22 Lbs
4th	20 Lbs	4th	24 Lbs
Per Cent Average Maximum Variation		**Per Cent Average Maximum Variation**	
Delivery 1	14.4%	Delivery 1	15.1%
Delivery 2	17.1%	Delivery 2	16.0%
Delivery 3	14.4%	Delivery 3	15.4%
Delivery 4	15.7%	Delivery 4	15.6%
	15.78%		15.5%

Answer 8. Our practice is to use the heavier weights on the back rolls of drawing frames and combers where there is more bulk, as well as on roving frames where there is more bulk, twist and resistance to drawing. We naturally want to use as light weights as possible, but regardless of whether the lightest weights are used on the back or front rolls, they should be heavy enough to hold the sliver or roving so it will draft instead of slip.

Every mill represents different manufacturing conditions so that each is more or less an individual problem, and what applies in one case does not apply in another.

Answer 9. "CONTRIBUTOR NO. 7176" states that he believes heavier weights should be put on the front roll. I think this is just fine for white work, especially if the mill is using the 5-roll drawing frames.

At one time we had the experience of having flaky drawing sliver appearing, mostly in cold weather. Additional weights were added to the front weight, causing the front rolls to lay together more closely, thus increasing the draft efficiency. Tests were run on the sliver tester, with the result showing an improvement of from 1 to 3 per cent in evenness of the sliver.

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This roving was kept separate throughout the roving processes and the yarn in the cloth seemed to be more smooth than the sample without the additional weight. When more weight was added to the intermediate, this also seemed effective as this roving was run on one process of spinning. It was shown clearly by the use of the roving tester that the roving was more even than the roving run without the additional weight. This, of course, was due to better drafting on the intermediate, thus giving more even yarn from the spinning process.

I might add that 14 pounds were used on drawing frames, 6 pounds on the slubber and 4 pounds on the intermediate. All this work was run and tested on cork rolls, which have a tendency to draft better if more weight is added to the front rolls.

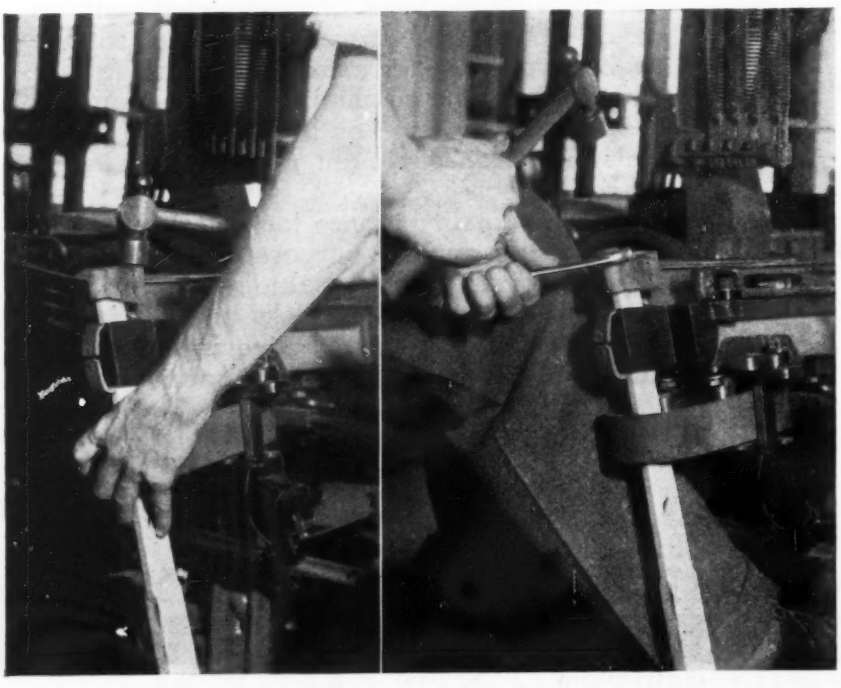
Loom Fixing Notes

Causes for Shuttle Turning or Jumping Out

1. Shuttle is driven out of shuttle boxes too early or late.
2. The reed is not lined with the shuttle box or the center of the reed may be out of line.
3. Too much space between the shuttle box and the end of the reed.
4. Shuttle boxes are warped, worn, splintered or not set correctly.
5. Reed frame is too loose.
6. Shuttle is worn.
7. The shed is too small, too high or too low; or too high or too low on the side.
8. Picker badly worn or partly broken.
9. Too much or not enough pick.
10. Shuttle boxes are out of time.
11. Shuttle box vibrators are bent or broken.
12. Shuttle boxes are set too high or too low.
13. All parts of shuttle boxes mechanism not properly oiled.
14. Box lifter chain broken or worn.
15. Compound levers and extensions worked out of place, bolts or studs loosened.
16. Harness or box chains timed incorrectly or set too high or too low.
17. Harness vibrators bent, broken or vibrator shoe broken or loose.
18. Dobby hooks bent or broken.
19. Harness or box chain cylinders shifted out of time.
20. Dobby knives or knife hooks worn or out of time.
21. Broken harness jack.
22. Hook knife worn or out of time.
23. Pattern mechanism out of order, gears worn, broken, notched gear slips on cylinder shaft.
24. Dobby harness jacks do not have enough play.
25. Harness cords or springs too tight or loose.
26. The shuttle is badly worn, may be only on one side or end.
27. Bent chain bars, broken risers or missing sinkers
28. The hole in the picker is too high or low.
29. Shuttle rebounds in shuttle boxes.
30. Friction plate not set tight against friction pulley

Of the cotton consumed in U. S. during May 1941, 20.8 per cent was classified as "sales yarn".

Method of Installing Picker on Loom



"Cotton" staff photos made in textile school of Ala. Poly. Inst., Auburn, Ala.

PICKERS are an expensive item in the weave shed, especially if not handled properly. If not installed correctly they may throw the shuttle out. The photograph at the left shows a method of putting a picker on that is said to be "all wet." Advice is that if the picker is struck on the forward end (as shown) the leather will be stretched and the picker will set low. After a short time it will rise in front and not be parallel. At right is shown what one man considers the proper way to put a picker on. He starts it with a gentle tap and then using his "34 wrench", he drives it in place. This is said not to stretch the leather, and a picker put on in this manner will remain parallel. Note that the picker has not been weakened by undercutting where the loop fits the stick.

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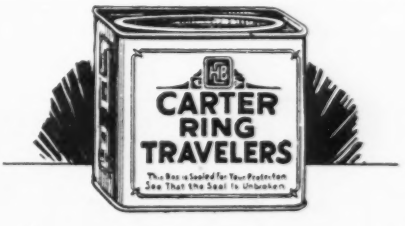

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Replacing Conical Bushing on Cards

EDITOR COTTON:

This is in answer to your "CONTRIBUTOR No. 7202", whose question appeared on page 120 of the June issue of COTTON. He is having trouble getting the new bushing in the conical bearing on his cards so that the cylinder will be lined up. Not being able to line the cylinder up, he has ground some of his cards to get the fillet level even though the cylinder is out of line and has practically ruined the clothing.

It is impossible simply to drive or insert the conical bushings in the wedge bearings when the former has become loose, and still receive the same setting of the card cylinder. One reason for this is that it is physically impossible to either make a bushing that is absolutely the same as the one that came out, or that has the same amount of wear that the replaced bushing has. However, it is possible to put the bushings in so that the card cylinder will be lined up, and it is done as follows:

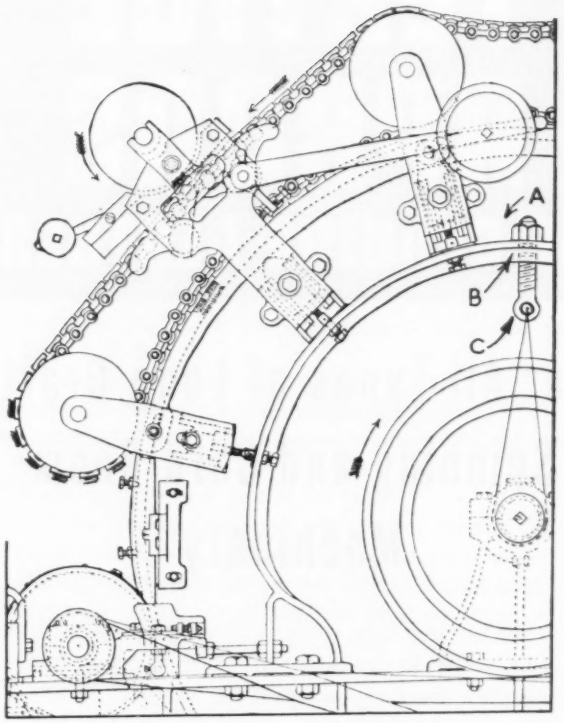
The bearings or cylinder pedestals on H. & B. cards are adjustable. There is a lock bolt on either side of the bearing and the bearing itself is in the form of a wedge. This contributor has probably been trying to insert the new conical bushing or drive the old one back in by leaving the lock bolts and bearings in place, which is not the way to do it.

He must loosen the bearing, drive the conical bushing in, and with the bearing loose, line up the cylinder in the proper relation to the flats. Once the cylinder is in the proper position, then the lock bolts holding the wedge bearings may be tightened. It might be cautioned that in tightening these bolts in place, the same care should be exercised as when grinding the cards and setting the various parts, or the cylinder will again be thrown out of line.

It is natural to assume that once the cylinder is in line, a new bushing can be inserted without moving the bearings, but this is not true. The bushing should be inserted as explained.

This method may require a bit more time, but it will be time that is worth spending. If the fillet is ground just because the cylinder is out of line, your contributor will be spending a lot of money for nothing, because card fillet is expensive.

CONTRIBUTOR NO. 7203



EDITOR COTTON:

Assuming that some of the wire is ruined on the cards run by "CONTRIBUTOR NO. 7202", I would proceed as follows:

1. Remove the flats.
2. Drill a bolt hole in the rib of the card as shown at "B" in the accompanying illustration. Have a chain or wire rope handy so that the cylinder can be lifted. Turn the nut "A" just enough to release the pressure on the bushing so it can be removed. Insert a new bushing and perform the same operation on the other side.
3. Reclothe the cylinder.
4. Place a level on the cylinder and level it.
5. Square the doffer to the rib of the card; this insures that the doffer is in place. Changing only one bushing will not be satisfactory.

WASH (R. I.)

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3. MILL NOTES—Special bulletin issued for Southern Mills.—UNITED STATES TESTING CO., Hoboken, N. J.

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109. CENTRAL STATION AIR CONDITIONING—Technical Bulletin 141 on this method of textile air conditioning by manufacturers of Parks Certified Climate equipment.—PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

110. UNIT AIR CONDITIONING — Bulletin 307 describes Humiduct system for accurate distribution of conditioned air.—THE BAHNSON CO., Winston-Salem, N. C.

111. SUPPLY, MAINTENANCE AND REGULATION OF HUMIDITY—General catalog of humidifying and air-conditioning devices including humidifiers, controls, atomizers, sprayers, etc.; also, lap weight indicators for picker room.—AMERICAN MOISTENING CO., Providence, R. I.

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205. SKF IN THE COTTON MILLS—24 page bulletin describing bearing installations for practically every machine in the textile industry including roller bearing spindle and tension pulley.—SKF INDUSTRIES, INC., Philadelphia, Pa.

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209. ANTI-FRICTION BEARINGS AS APPLIED TO SPINNING, DRAWING AND TWISTING FRAMES—Shows with detailed drawings how a simplified design of roller bearing applications is made to replace the plain babbitt bearings and lists the advantages that are gained. — HYATT BEARINGS DIV., General Motors Corp., Harrison, N. J.

210. GOODYEAR MECHANICAL RUBBER GOODS CATALOG—40 page catalog giving practical information and tables helpful in the selection of the proper belting, hose or packing to suit the requirements of the mill.—GOODYEAR TIRE & RUBBER CO., Akron, Ohio.

211. JOHNSON BRONZE BULLETIN NO. 340—Showing over 300 sizes Johnson general purpose bronze bushings.—JOHNSON BRONZE CO., New Castle, Pa.

212. GATES TEXTILE ACCESSORIES — Showing the increased efficiency and economy to be secured through the use of Gates cone belts, evener belts, card bands and loom binder cushions.—THE GATES RUBBER COMPANY, Denver, Colo.

213. LUBRICATION—This attractive booklet contains valuable and interesting articles on loom lubrication and also on spinning design and the function of spindle oils.—THE TEXAS COMPANY, New York, N. Y.

214. NORMA-HOFFMANN BEARINGS CATALOG—NORMA-HOFFMANN BEARINGS CORP., Stamford, Conn.

215. TANNATE BELTING — Leaflet describing Rhoads Tannate leather belts and their uses and advantages in textile mill operation.—J. E. RHOADS & SONS, Philadelphia, Pa.

216. LEATHER BOOKLET NO. 202 — Attractive booklet illustrating and describing BONDARON Special Tanned Leather as used in various forms such as Check Straps, Pickers, Harness Straps, Lug Straps, Bumper Straps, Solid Round Leather Belting, Flat Belting.—CHAS. BOND CO., Philadelphia, Pa.

218. BALL BEARINGS ON TEXTILE MACHINERY—Catalog 9 gives advantages of ball bearings, describes types, illustrates each type of textile machinery.—THE FAFNIR BEARING CO., New Britain, Connecticut.

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222. NEEDLE AND BALL BEARINGS—Catalog 404 gives ball bearing data with data on selection of proper bearings; Catalog 22 outlines use of needle bearings, including textile uses, types, installation, lubrication and general data. Both issued by TORRINGTON CO., Torrington, Conn.

223. SHORT CENTER PIVOTED MOTOR DRIVES—Complete tabulation paper pulleys, pivoted motor drive bases showing selection tables, engineering tables, prices. Price Sheets 860 and 861.—ROCKWOOD MFG. CO., Indianapolis, Ind.

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242. REEVES VARIABLE SPEED CONTROL—Catalog G-397, 120 pages containing numerous illustrations and examples of variable speed control equipment applications in textile industry.—REEVES PULLEY COMPANY, Columbus, Ind.

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408. THE BOWEN SPINNER'S RECORD BOOK—Handy leather bound notebook which contains a world of useful information as well as tables for keeping accurate spinning data.—U. S. RING TRAVELER COMPANY, Providence, R. I.

409. ROTO-CONER — Bulletin describing the new No. 44 Universal Winder, known as the Roto-Coner for winding knitting yarns, which has many new and distinctive features. — UNIVERSAL WINDING COMPANY, Providence, R. I.

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Continued on Page 114

Continued From Page 113

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502. TEXTILE COUNTERS—Catalog T37 describing pick counters for looms, hank counters for spinning, yardage counters for cloth loom, etc.—VEEDER-ROOT, INC., Hartford, Conn.

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508. SIZING AND FINISHING — A pamphlet which will give the mill man an understanding of starch properties which will lead to greater efficiency in sizing and finishing.—STEIN, HALL & CO., INC., New York City.

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511. HOUGHTO-SIZE SR — Leaflet describing a new sizing compound for spun rayon warps which provides high breaking strength, greater elasticity and increased weave-room production at low cost.—E. F. HOUGHTON & CO., Philadelphia, Pa.

DYEING, FINISHING, CLOTH ROOM . . .

601. SANFORIZING MACHINERY — Illustrated booklet describing the sanforizing machinery offered by the TEXTILE FINISHING MACHINERY CO., Providence, R. I. This bulletin is available only to finishing plants or executives thereof.

602. ALUMINUM IN THE CHEMICAL INDUSTRY—Published by Aluminum Company of America. Fifty-two pages. Text and illustrations covering adaptability of aluminum and aluminum alloys to chemical industry applications and characteristics governing recommended uses.—ALUMINUM COMPANY OF AMERICA, Pittsburgh, Pa.

603. THE MORTON SYSTEM—Illustrated literature describing the Morton Improved double circulating raw stock dyeing and bleaching machine, the Morton horizontal revolving beam and package dyeing machine and beam bleaching machine, the Morton vertical package and roving dyeing machine.—MORTON MACHINE WORKS, Columbus, Ga.

604. THE NEW PROCTOR AUTOMATIC YARN DRYER—6 page illustrated folder describing the new Proctor automatic yarn dryer which has the exclusive new Proctor traveling skein protector.—PROCTOR & SCHWARTZ, INC., Philadelphia, Pa.

605. BUTTERWORTH ELECTRIC GUIDERS — 6-page folder describing and illustrating the new Butterworth Electric Cloth Guider. This guider is built on the same principle as the Foxwell Air Guider.—H. W. BUTTERWORTH & SONS CO., Philadelphia, Pennsylvania.

606. SLITTERS AND ROLL-WINDERS — 8 page folder illustrating more than 25 types of slitters and roll-winders for textiles. Form CF-640.—CAMERON MACHINE CO., Brooklyn, N. Y.

607. GENERAL ELECTRIC EQUIPMENT FOR TENTERS—Folders including drive and control, guider equipment, welt-straightening controls—providing means of finishing cloth of uniform quality.—GENERAL ELECTRIC CO., Schenectady, N. Y.

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701. TEXTILE CHEMICALS—36 page booklet on uses and properties of chemical products.—ROHM & HAAS CO., Philadelphia, Pa.

702. TEXTILE PROCESSING WITH ARTIE SYNTEX A AND T—50-page illustrated booklet describing the properties of these new materials and giving tentative or suggested formulas for a number of applications in textile processing. — COLGATE-PALMOLIVE-PEET CO., Jersey City, New Jersey.

704. THE TEXTILE APPLICATION OF METASOL (CALGON)—Handbook with detail information covering the use of Metasol in Scouring, Bleaching, Dyeing and Finishing.—BURKART-SCHIER CHEMICAL CO., Chattanooga, Tenn.

705. THEORETICAL AND APPLIED SILK-SOAKING—Attractive 28-page booklet outlining methods of silk-soaking and outlining investigations on the soaking, back-winding and degumming of silk—HART PRODUCTS CORP., New York City.

706. RAYON OILS — Leaflet describing three Houghton products used for throwing rayon filling yarns for weaving, as softeners in gelatin and similar solutions used for sizing and as softening oils for yarns, knitted and woven fabrics.—E .F. HOUGHTON & CO., Philadelphia, Pa.

707. THICKENING MATERIALS FOR TEXTILE PRINTING—Describing materials and methods employed in preparation of color thickening so that it may be properly and economically transferred to cloth through the medium of the printing machine.—STEIN, HALL & CO., INC., New York City.

708. LUPOMIN—Leaflet describing Lupomin, a new cation active softening agent for all textiles but especially acetates and rayon crepes; odorless, permanent and easily applied; imparts soft, full feel.—JACQUES WOLF & CO., Passaic, N. J.

709. CAUSTIC SODA BULLETIN—A data and reference book designed for the user of caustic soda. Complete with charts, drafts and formulas.—PENNSYLVANIA SALT MFG. CO., Philadelphia, Pa., who also manufactures Hydrogen Peroxide.

710. THE MAPRO SERIES—34 page book describing the use of detergents in general textile mill work.—ONYX OIL & CHEMICAL CO., Jersey City, New Jersey.

711. KEY PRODUCTS FOR TEXTILE INDUSTRY—22 page leaflet describing textile specialties used in dyeing, bleaching, and finishing as applied to Southern textile industry from Southern plants of AMERICAN CYANAMID & CHEMICAL CORP., Charlotte, N. C.

712. STANDARD SILICATE ALKALIES—Booklet on silicate of soda for kier boiling, bleaching, water treatment, etc., giving tables for specific gravity, temperature correction, tank capacity.—STANDARD SILICATE DIV., Diamond Alkali Co., Pittsburgh, Pennsylvania.

713. LIOVATINE ER—Vat dyeing assistant increasing penetration and level dyeings with maximum yield of color.—SANDOZ CHEMICAL WORKS, New York City.

714. FUGITIVE TINTS—Information on water soluble, oil soluble, all types fugitive tints.—TINT SERVICE DIV., United States Testing Co., Hoboken, New Jersey.

715. AQUAROL AND ARKANSAS PRODUCTS—Bulletins on Aquarol, water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and rayon, hosiery processing.—ARKANSAS CO., INC., Newark, N. J.

716. DOW INDUSTRIAL CHEMICALS AND DYES—General catalogue listing Dow products used in textile industry for many purposes including printing, finishing, dyeing and general treatments.—DOW CHEMICAL CO., Midland, Mich.

729. ORGANIC CHEMICAL SPECIALTIES—BULLETIN 1B—Covers various wetting, dispersing, scouring, emulsifying and foaming agents, most with surface active properties, used for wetting, cleaning and penetration.—Fine Chemicals Division, E. I. du Pont de Nemours & Company, Wilmington, Del.

730. PRINTS ON NAPHTHOL PREPARE—Shade card illustrating prints of salts and bases using Methocel as printing thickener.—CIBA CO., INC., New York City.

KNITTING . . .

801. THE WILDMAN SINGLE-HEAD FULL-FASHIONED HOSIERY MACHINE—Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

802. RULER AND CONVERSION TABLE—Converting decimals of inch to millimeters or vice versa. Useful to knitting mills. — THOMAS & SKINNER STEEL PRODUCTS CO., Indianapolis, Ind.

803. THE TUBE-TEX FOR TUBULAR KNIT GOODS—Bulletin describing this modern machine which extracts, processes, dries, conditions and folds in one continuous operation, lowering costs, saving labor, power, space and waste.—H. W. BUTTERWORTH & SONS CO., York and Cedar Sts., Philadelphia, Pa.

804. FULL-FASHIONED HOSIERY MANUFACTURE—Illustrated folder giving the history of full-fashioned knitting and describing in detail the different processes in present day manufacturing and the application of Gulf lubricants to the various machinery.—GULF OIL CORPORATION, Pittsburgh, Pennsylvania.

805. ELASTIC ATTACHING MACHINE — Form 885 on new three needle machine for attaching flat elastic with perfect stretch tension device and other features.—WILLCOX & GIBBS SEWING MACHINE CO., New York City.

806. DEPENDABLE FINISHING FOR MODERN ELASTIC TOP HOSIERY—Describing and illustrating equipment for basting and attaching insert elastic, attaching wide or welt elastic and seaming elastic in women's hosiery.—UNION SPECIAL MACHINE COMPANY, Chicago, Ill.

807. CIRCULAR KNITTING MACHINES—A fifty-two page illustrated booklet containing valuable information on the manufacture of transfer top hosiery. Includes illustrations of rib knitting principles, yarn changers, selvage welt, loose course and methods of laying in Lastex.—FIDELITY MACHINE COMPANY, Philadelphia, Pa.

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901. LOCKSTITCH MACHINE WITH AUTOMATIC LUBRICATION—Bulletin illustrating new unit for single needle stitching on wide variety of articles. Form 886.—WILLCOX & GIBBS SEWING MACHINE CO., New York City.

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MATERIALS HANDLING . . .

1001. HOW TO DETERMINE WHERE OVERHEAD MATERIALS HANDLING EQUIPMENT CAN BE USED PROFITABLY—Illustrated folder including elements of materials handling system, preparation of simple layout.—CLEVELAND TRAMRAIL DIVISION, Wickliffe, O.

1002. CATALOG NO. 22—An attractive illustrated catalog describing in detail the Shamrock shipping containers and the new canvas trucks for textile use. —MEESE INC., Madison, Ind.

1003. CASTERS AND WHEELS—192 pages, describing casters and wheels suitable for all types of industrial application. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach, Calif.

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1005. HAND TRUCKS—24 page catalog on hand trucks for plant and warehouse use.—THE FAIRBANKS COMPANY, New York City.

1006. LANE CANVAS BASKETS—16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. HOW HANDLING PROBLEMS HAVE BEEN SOLVED—A 50-page booklet presenting in pictorial form many solutions to industrial handling problems and showing how they reduce costs, save labor, eliminate storage and provide free movement of stock between processes.—AMERICAN MONORAIL COMPANY, Cleveland, Ohio.

1008. ELECTRIC INDUSTRIAL TRUCKS, HAND LIFT TRUCKS AND SKID PLATFORMS—64 page illustrated book on material handling with equipment to fit every load and many action pictures showing handling ideas in many industries.—YALE & TOWNE MANUFACTURING CO., Philadelphia, Pennsylvania.

1009. DANDUX CANVAS BASKETS—Catalog illustrating and describing "DANDUX" line of Baskets, Hampers and Trucks for the Textile Industry and general use.—C. R. DANIELS, INC., Newark, New Jersey.

MISCELLANEOUS . . .

1101. UNBRAKO SELF-LOCKING HOLLOW SET SCREW—Bulletin Form 532 includes illustration and descriptive matter of this latest improvement in socket and screws. This bulletin also features the complete line of "Unbrako" Socket Screws.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1102. REPAIR PARTS FOR TEXTILE MACHINERY—36 page booklet and catalog on replacement parts for opening, picking, carding, spinning and twisting machinery. — HENDERSON FOUNDRY & MACHINE CO., Hampton, Ga.

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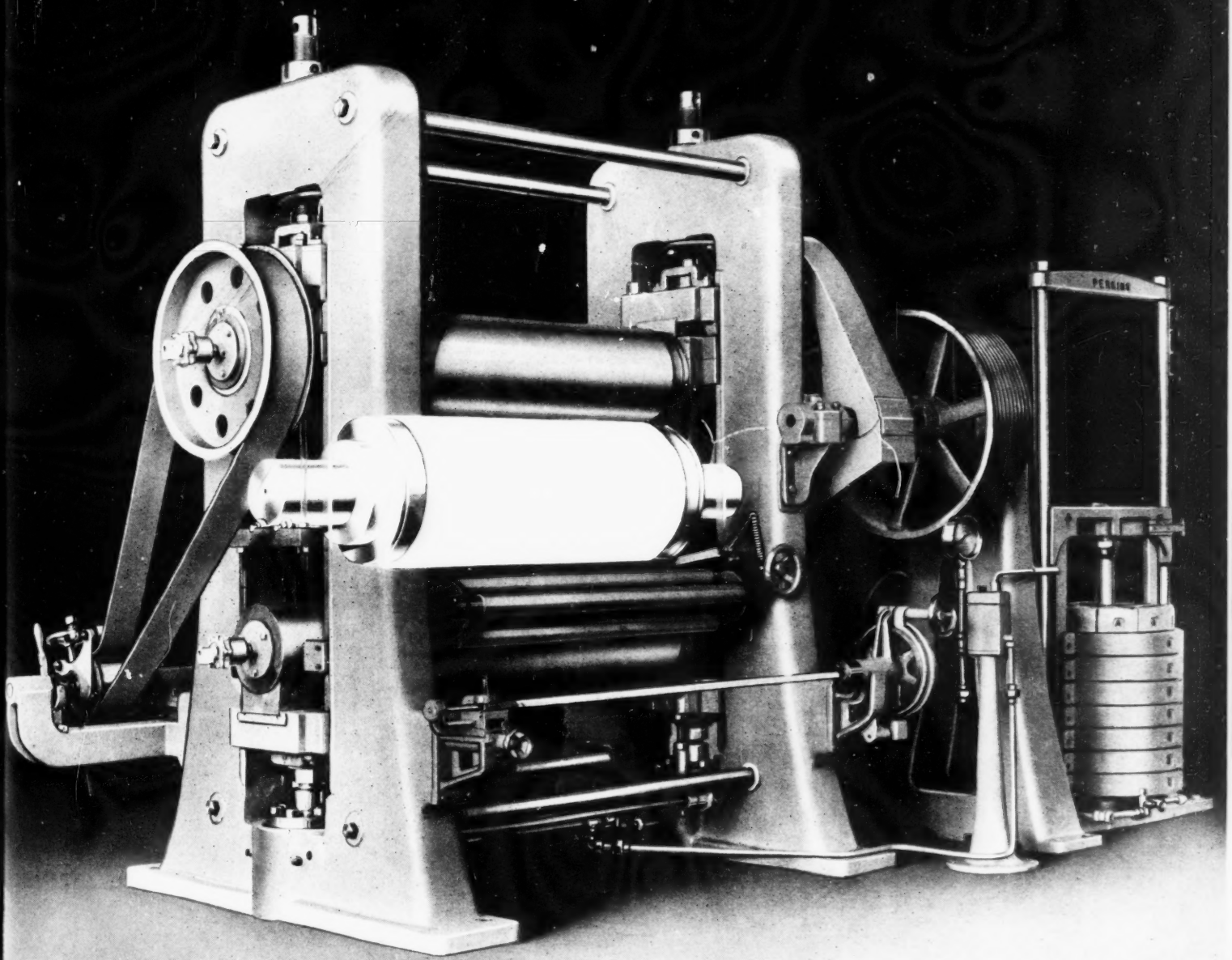

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KNITTING SECTION

Full-Fashioned Management

By Henry Britt

• This is the third installment in a series of articles on management in full-fashioned hosiery mills, though many of the comments will pertain to circular management also. The series began in the April issue and was continued in May. The series is written by a prominent executive who requested that we not disclose his identity, hence the pen name. Comments are invited.

FULL-FASHIONED hosiery, though not being alone in this respect, requires a great deal of handling of goods through various stages before the completed article is ready for the counter. Few manufactured products, however, require the delicate handling that the gossamer, filmy web of present-day hosiery demands and it is the purpose of this discussion to take under consideration a few of the problems arising in this connection. Irregulars and seconds due to improper handling and routing of greige goods constitute a fair percentage of the total imperfect goods and any effort made to reduce this percentage will result in lower operating costs.

Handling Problems

Years ago, when cotton or heavy silk dip-dye hosiery totaled the output of mills, little regard was given to auxiliary equipment aside of the machinery actually used to produce the stockings. This type of merchandise withstood much abuse in transit. Bundles of work were thrown and sorted on the floor and came in contact with everything imaginable, both in the knitting room and other departments as well. Today tells a different story what with sheer silk and nylon hosiery constituting by and large the biggest percentage manufactured. New methods and new auxiliary equipment has sprung into being because of the necessity of greater care in handling and efficiency of operation when profits are more of a myth than a reality.

Handling Single-Unit Goods

If the single-unit type of stocking supersedes the dual method of knitting, namely legger and footer, many problems in handling will be eliminated.* One of the

worst evils comprising the distribution of goods in process is the need of carrying a leg stock sufficiently large to accommodate the proper sizing of the work in the footing stage. This represents an investment of capital by no means small, an investment that the single-unit stocking will obviate. Various difficulties arise out of this department, such as the unaccountable loss of goods between legging and footing, together with the loss from damaged or ruined leg blanks directly at the footing machines. The amount of mismatching due to the lack of synchronization in stitch-size between the two machines adds to the cost of operation as well as the necessity of keeping silk lots segregated until after footing is completed.

Co-operation Needed to Change Styles

Efforts now being made toward single-unit knitting are gradually producing results and there is little doubt this would have been accomplished long ago, if the trade had not been so conformist-minded. Whenever a stocking was produced that did not conform with the general idea in practice, it was discarded as either ill-fitting or ill-appearing. This, however, is being overcome. An example will be illustrated as referred particularly to the welt or hem of a stocking. There is nothing wrong basically with a single thickness welt, if properly constructed, and yet all attempts at launching this type of ladies' hose as standard construction has met with failure. Much of the high cost of production could be reduced if this stocking became the standard for the trade. All that would be necessary to accomplish this would be the proper promotional work on the part of a large group of manufacturers, together, of course, with the co-operation of the buyers to this end. Other industries can and do change the habits of millions of consumers, especially when it is to the advantage of the buying public.

*There is much to be said in favor of the dual method of knitting full-fashioned hosiery, but this discussion concerns itself with the problems of processing and not with the merits of the single-unit and dual system of knitting. Any operation that can be eliminated in handling silk hosiery will reduce the imperfects caused by snags, pull threads, etc.—The Author.

Handling Goods Made by Dual Method

Returning to the subject directly under discussion, we will confine our thoughts to the distribution of greige goods through various stages up to the inspecting department. The methods used vary widely, depending upon the layout of the mill and upon its size. Certainly, if the goods can be handled from one stage to another in the same room, a different set-up will be used from that of a mill where the goods must be sent from one plant to another. As most of the hosiery manufactured today is still the dual unit type, we will take under consideration the necessity of keeping a leg stock room and the rationing of the legger dozens to the footing machines.

Most mills find it desirable to group the legger work in five or ten dozen lots, these amounts making it easier to check through the stock room. Usually, the legger examines his work and keeps apart such goods that will require special attention, such as mending or what might be termed substandards due to yarn or knitting imperfections. Oily or soiled goods are segregated for two reasons. One is to prevent the absorption of oil into clean work and to give the dyer an opportunity to handle such goods separately. Most needle oils are fairly stainless and wash out readily in the de-gumming process, but often the oil is accompanied by residue from the machine and requires special scouring to remove all traces of it. It has been noted in nylon that needle streaks and the like will not wash out readily in scouring and will, in certain shades, produce a purple colored streak or spot wherever the oil is present. Additional scouring will usually overcome this difficulty.

As stated earlier, greige goods are usually handled in five or ten dozen lots through the various departments, this method permitting a minimum number of tags to be used and facilitating bookkeeping, etc. The usual procedure is to adopt a tag that can be carried through to the dye-house and in some instances through boarding and partial finishing. The perforated stub type of tag is generally used, whereby stubs may be torn off in each stage of processing. This permits an accurate record at all times, especially if the tag number is recorded.

Handling at Footer

It is evident that when bundles of leg blanks are issued to the footer, the work will not be returned with the identical tags that were on the goods. This is due to the fact that the bundle must be opened and distributed over several sections of the footing machine. This is the only place, however, where something of this nature takes place, as all other departments in greige processing can and do tie up the same goods with the identical tag. At the end of each week the leggers are permitted to turn in broken lots or dozens in groups less than the stipulated amount. The number of stockings are clearly marked on each tag and stub thereof. However, there are other times when broken bundles may be turned in, such as when style changes take place in the middle of a week or for any reason that the goods must be separated.

Checking on Legger Dozens

One of the most difficult checks to be kept is the number of legger dozens rationed to the footers. It is almost impossible to have returned a given number of legger dozens identical to the amount rationed to the footing operators. The reasons are quite numerous, the main one being that a certain amount of legs are spoiled and unfit for re-topping at the footing machines. These usually go back to the legging department without any record kept of the amount, causing a shortage between the two departments. Another cause can be traced to the inability of knowing whether a legger has placed twenty-four stockings in his bundle or not. Most mills adopt a method of spot-checking the legger dozens for shortage, as counting all the bundles is more costly than practical. The footer as well as the legger must be depended upon for honesty in count. Beyond this point there is little danger of shortage, as the bundles are re-tied with the same amount and tag as came with them.

One other difficulty that arises at the footing operation is that the knitter generally holds a number of odds in sizes to fill out his bundles when changing from size to size. This is partially eliminated if the plant is large enough to keep certain operators on one or two sizes continuously. It is not uncommon to see as much as two or three dozen in broken sizes at the footer bench, holding these goods to fill in as occasion requires. All this adds to the difficulty of keeping an accurate check, once the legs are rationed to the footers.

As previously stated, there is usually no record kept of the number of legs spoiled at the footing machines. These legs, though paid for one time, will be re-topped and entered into the stock-room as new goods. Eventually, a shortage of goods will become apparent between footing and legging departments. Some mills do require an identical number of legs returned by the footers as compared to the amount rationed out, whether returned as perfect work or not, but this system becomes quite complicated at times.

Rationing of sizes to footers will, in some instances, create a problem if the plant is small. Generally, the footing piece rate is uniform for all sizes knitted on a given style and as more time is required to knit the larger sizes, some method must be adopted to distribute the work in all fairness to the operators. Some mills keep a group of footers on size 9 and 9½ continuously, giving the extreme large and small sizes to another group. This works fairly well, but at times will give the first group a slight advantage. One of the best methods is to keep a record of requirements and the sizes already knit, and rotate the assortment back and forth between all machines.

Dry Room for Legs

Gum silk legs generally have to be dried before footing, especially if knitted in rooms equipped with humidification. A dry room can be constructed at low cost by building a portable framework of angle iron and covering it with sheet iron or any suitable thin metal. The room

can be lacquered or painted inside and out, giving a very desirable appearance. A small radiator and blower can be installed in one end of the room to circulate heat throughout the enclosure, providing a vent is inserted in the door, or some such suitable place, which will permit a change of air occasionally. Mobile racks can be constructed with numerous hooks for holding legger dozens in unwrinkled positions, these racks or trucks being wheeled in and out at will. Where practical, they may be rolled through the knitting room and the bundles collected and hung directly upon them, lessening the need of extra handling. On the other hand, some mills find it advantageous to have the operators deliver their day's production to a window in the stockroom, rather than make the collections at the machines.

Handling Nylon Goods

Nylon goods should be placed in suitable containers rather than expose them to pull thread hazards. A simple and economical method of handling nylon legger dozens is to wrap up the bundles in cloths and tie strings around them. Little space is required by this method and the legs can be kept unwrinkled at the transfer line if rolled up in their entire length. These same cloths may be used throughout the entire greige processing of nylon. thus keeping the percentage of pull-threads down to a minimum.

Handling at Loopers

The next stage after footing is looping and there are several ways of distributing the work bundles in this department. Here again, one method will not be adaptable to all local conditions. Many plants find it more efficient to have the loopers come to the stockroom and take bundles or sacks of goods back to their machines rather than deliver them to the operators by one person. The latter method necessitates the use of large work baskets or bins at the looping tables, as it is not always practical to keep the work collected as frequently as the operators can deliver the bundles to the stockroom.

The looping operation makes it unnecessary to untie the individual dozen for the ordinary run of goods except in certain instances. Occasionally, an operator will discover goods that are unfit for looping and it will become necessary to remove the defective work for replacement. The bundle is usually marked down from the original amount to conform with the number remaining. At the end of the looping operation two stubs are torn from the tag, one being kept by the looper as a receipt and the other going to the payroll department after proper checking at the stockroom.

Seaming Operation

The seaming operation is usually handled through the same stockroom as that of looping and in much the same manner. After the looped goods are checked in at the stockroom they are ready for distribution to the seaming operators. Again, the operators pick up their own work at the stockroom window and return it upon completion of seaming. Two more stubs are removed from the tag as in the looping stage. In this operation the seamers will have more occasion to break a dozen or bundle because of faulty goods than in the previous stage. Bad selvages or broken places in the edges will appear now and then despite the vigilance practiced in the knitting room. Crooked sides, etc., must be thrown out for correction at their source, if these defects are to be remedied.

In some instances the bundles are laid aside and held until replacements are made rather than mark down the tag. This will depend upon the time required for such adjustments and the policy of the plant in these cases. A small mill can usually return the work to the knitting room and make the necessary check in very little time. After the seaming stage the goods are ready for the greige inspection. This will be discussed in a later installment which will appear in an early issue.

New Piece Dye Kettle

Riggs and Lombard, Lowell, Mass., have developed the new Type TLBT stainless piece dye kettle, which is said to be the nearest thing to a universal kettle the company has ever offered. It has been tried in practically every different type of woolen and worsted mill and has successfully dyed fabrics ranging from 5-ounce flannels to 32-ounce meltons, and from worsted shirtings, through gabardines to heavy men's wear serges, and from knitted shoe linings to heavy knitted ski cloth. The knurled drum reel eliminates slip. Ratio of dye liquor per pound of cloth is said to be so exact that substantial savings in dyestuffs result.

◆

Flameproofing Material

Glyco Products Co., Inc., 230 King St., Brooklyn, N. Y., has developed flameproofing Agent 361 for the flameproofing of textiles, paper, wood and other porous and fibrous materials. It is said to be an odorless, water-white liquid, non-toxic and non-irritating to the skin, and mixes with cold water readily.

◆

Aluminum Paint Substitute

Wilbur & Williams Co., Park Square Building, Boston, Mass., have announced a substitute for aluminum paint, termed Light Gray Totrust, which is said to serve adequately for outside or inside painting, and which has approximately the same light reflection as aluminum paint. Rust can be stopped at its source by this product, according to the manufacturers. Totrust is a penetrative paint, has no odor, and one gallon is said to cover from 800 to 1200 square feet. It can be applied to damp metal or solid rust.

◆

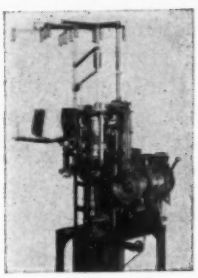
Koroseal on Priority

Due to numerous military applications, Koroseal, the synthetic rubber-like material of The B. F. Goodrich Company, Akron, Ohio, has been placed on the OPM's mandatory priority list in the classification with aluminum and other items vital to national defense. This makes official the voluntary policy adopted by the company several months ago under which substantially all Koroseal production was diverted to defense uses.

KNITTING KINKS

The Komet Machine

Article 7



Draw Thread Bracket Assembly

IN THE LAST ARTICLE of this series*, appearing in the June issue, we discussed the wind-up device, work drum and double feed racking mechanism. Now we shall consider the various parts which are necessary to put the double feed into and out of action. This very interesting and compact unit is shown herewith, and it can be found on Plate 30-A in the new Komet and Links and Links machine catalog of parts.

The complete assembly is mounted on the draw thread bracket (101879), the bracket being securely fastened to the back of the machine base. The vertical shaft (302775) revolves in the hole of the draw thread bracket and the ratchet wheel (302780) supplies the necessary motion, being driven by the double feed racking mechanism. The various cams shown mounted on the vertical drive shaft (302775) supply the means for moving the draw thread feed finger and double feed finger in and out of action at the proper time.

Each cam controls the movement of some part of the two-feed mechanism and is individually adjustable in that it can be moved forward or backward, which permits timing its function earlier or later in relation to needle cylinder movement. Ample adjustment facilities make this unit extremely flexible and give the machine fixer a chance to correct minor difficulties by adjustment instead of grinding, welding, brazing and the like.

We shall consider each cam on the vertical drive shaft and its function, beginning at the top. First we have the draw thread trapper cam (203443); this cam moves the draw thread trapper slide and the slide in turn pushes against the stop screw (303806) in lever (203462) which opens the yarn clamp (203465). The draw thread trapper cam (203443) does two things; it opens the yarn clamp when draw thread knitting begins and releases the end at the proper time; it closes the clamp and cuts off the yarn when draw thread knitting is completed. Timing of the draw thread trapper cam is determined in accordance with draw thread feed finger movement.

The draw thread feeder cam (203469) moves the feed finger (302794) into feed position and out of action. The feed finger must be in feed position so the first long butt slider in the bottom cylinder will begin draw thread knitting and continue for one and one-half rounds; knitting stops on the last long butt slider in the lower cylinder. This leaves two courses of draw thread knit in the long butt and one course in the short butt portion of the lower cylinder.

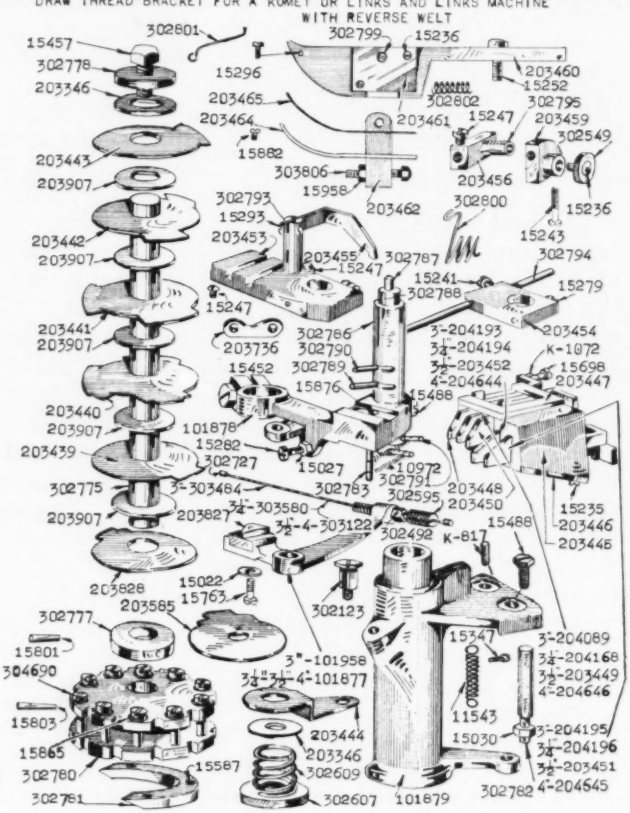
The draw thread trapper cam (203443) should not be set so it will open the yarn clamp immediately when draw thread knitting begins; opening of the yarn clamp should be delayed until the end is about opposite the yarn clamp. Make sure that the yarn clamp releases the end without any pull from the needles to the clamp; holes will result in the fabric if the needles pull the yarn out of the yarn clamp.

Draw Thread Feed Finger Adjustments

Keep the draw thread feed finger set in as *near* to the latch guard as possible, and allow sufficient clearance for a knot in the yarn to pass and no more. When in feed position the finger should be back toward the latch guard bracket and within 1/16-inch

PLATE 30-A KOMET

DRAW THREAD BRACKET FOR A KOMET OR LINKS AND LINKS MACHINE WITH REVERSE WELT



*Other articles in the series appeared in the December 1940 issue, and the January, February, March, April and June issues.

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to 3/32-inch from resting against it; this position gives sufficient lead of yarn to the needles.

Set the draw thread feed finger as *low* as possible—it should just clear the top of the sinkers when it swings in and out of feed position. The feed finger being round prevents an extremely low setting without rubbing on the top of the sinker. If a lower setting is desirable, remove the feed finger and flatten the under side by polishing; this will do no harm to the feed finger but will increase the range of adjustment.

The size or count and kind of draw thread being used have a direct bearing on feed finger settings. Too much tension on draw thread yarn will often cause dropped stitches on the first needles which take the yarn. Remember that the needle latches in closing knock the yarn into the needle hook. Yarn clamp and cutter block (203460) set too far away from the cylinder will also cause dropped stitches and holes while draw thread is being knit in. When the draw thread feed finger moves to feed position the yarn should lay against the needles. All adjustment facilities must be fully utilized to make this possible.

Double Feed Feeder Cam

The double feed feeder cam (203441) supplies the necessary motion to move the two feed finger into feed position and out of action at the proper time. Most two feed Komets are set up to go into double feed knitting immediately after the welt has been made and 1x1 top knitting begins.

Two feed Komets can be changed in a few minutes to make a single feed 1x1 top and go into two feed knitting at the double transfer where broad rib knitting begins. Two feed knitting of course increases production considerably; it actually saves half the time required to make the top, leg and foot on a single feed machine. Also, if elastic yarns are used in the top, two feed knitting saves 50 per cent of the elastic which would be used on a single feed machine making the same length of 1x1 top.

When the two feed mechanism goes into action knitting begins on the first medium butt slider in the bottom cylinder (depending on the slider set up); the double feed feeder cam (203441) moves the double feed finger into feed position in ample time so the first needle to begin knitting will take the yarn.

The important adjustment insofar as the feeder cam (203441) is concerned is to have it set so it will move the feed finger *out* of action at the proper time. This setting is determined and has a direct bearing on the slider set up and cylinder movement. A simple way to get it correct is to turn the machine by hand as it goes onto the heel; notice carefully when the last needle to take the two feed yarn begins its downward movement to make the stitch—as soon as the latch closes the feed finger can begin to move out of action.

The feeder cam (203441) should be timed or set accordingly. If the feed finger moves out of feed position too early, dropped stitches will result on the last one or two needles (if the feed finger moves out too late) it will fail to put the yarn into the yarn clamp.

The double feed trapper cam (203442) must of course be set to clamp and cut the two feed yarn when the feed finger is fully out of action and the yarn has been carried around into the clamp. It is also important to see that the yarn clamp opens in time to prevent any pull on the yarn when the two feed finger has gone into feed position and knitting has begun. If trouble develops due to two feed yarn failing to get into the yarn clamp in time, or being released too early or too late, check up on the two feed finger movement first, then re-set the double feed trapper cam (203442) accordingly.

Keep in mind also that any readjustment of wear which will affect the movement of the ratchet wheel (302780) (moving it earlier or later) will affect the timing of all the cams mounted on the vertical shaft (302775). The cylinder movement remains the same; therefore the two feed mechanism must be timed to work in harmony with the cylinder movement.

Double Feed Finger Adjustment

Set the double feed finger in as near to the latch guard as possible, leaving sufficient space between the inner end of the finger and the latch guard for an ordinary knot in the yarn to pass through. Fingers set too close to the latch guard will cause a press-off at every knot.

Adjust the feeder guide post (302793) so that the feeder guide (203455) will hold the feed finger up high enough to clear the sinkers when it moves into and out of feed position. The feed finger should be set on the shaft (302787) so it will be from 1/16-inch to 3/32-inch from the latch guard bracket when fully in. When the feed finger is out of action the outer end of the finger should be directly over the center of the clamp and cutter block.

Sufficient tension should be kept on the feed finger pivot spring (302800) to prevent the finger from bouncing when it moves into and out of feed position. The feeder guide post (302793) is adjustable up and down; the feeder guide (203455) is not adjustable and the screw (15293) should be used only to keep the guide tight to the post. The best bet is to loosen the screw (15293), raise the guide upward as far as it will go and then tighten the screw securely and set the post to control the feed finger height.

Miles of yarn passing through the hole in the feed finger will cut a gap in time; even though small it will give trouble so it is best to repolish the holes in the finger and be sure to bevel off the inner side so the yarn will not lead over a raw or sharp edge. Combed cotton yarns cause lint to form when run over a sharp edge in the feed finger.

Bolt Cam Operating Cam

The bolt cam operating cam (203440) serves a two-fold purpose on double feed machines; it supplies the means for lowering the sliders into the auxiliary stitch cam race for draw thread knitting, and in a like manner controls the sliders for two feed knitting. Correct setting of this cam is very important since the lower bolt must move in and out at the proper time in relation to slider butt set up and cylinder movement, slider butt and needle action in

both upper and lower cylinders, are controlled directly or indirectly by cam (203440).

The bolt cam operating cam controls the movement of the double feeder slide (203450) which in turn moves the lower bolt to one of four positions, fully out, one-third in, two-thirds in and fully in. At fully out position the lower bolt clears all slider butts; at one-third in it clears medium butt sliders and lowers long butt; at two-thirds in it clears short butt and lowers medium and long butt and when fully in all sliders are lowered. The various steps on the bolt cam operating cam assure the proper distance of inward and outward movement. The all important point is that the movement takes place at the proper time.

The following is a brief summary of the bolt cam operating cam action on the lower bolt and sliders in the lower cylinder at various points. As draw thread knitting begins the lower bolt moves in to clear the medium butt sliders and lower the long butt, while long butt sliders are passing under the feed cam it moves fully in; when the long butt sliders have completed one revolution and are again passing under the feed cam the lower bolt moves out far enough to again clear the medium butt sliders. When the medium sliders have passed the feed cam the lower bolt moves fully out.

After the welt has been made the feed cam moves in again far enough to clear the short butt sliders on the first move and lower the medium and long butt sliders. On the next move the feed cam moves fully in and remains in this position for the duration of 1x1 top and broad rib leg knitting. As the machine goes onto the heel the feed cam moves out while long butt sliders are passing, far enough to clear the short butt on the first move and fully out while the short butt sliders are passing the feed cam. When the heel is completed the feed cam moves in on the first move far enough to clear the short butt sliders and fully in on the next move, while long butt sliders are passing under the feed cam.

When the foot knitting is completed and the machine goes onto the toe the feed cam action in relation to slider butts in the lower cylinder is the same as going from leg to heel knitting. Thus the cycle of lower bolt action controlled by the bolt cam operating cam has been completed for the knitting of one sock.

The bolt cam operating cam seldom gets out of position once it has been properly set and the cap screw (15457) in the top of the vertical shaft has been tightened securely. Two feed driving mechanism getting out of time and causing a jam-up may cause the operating cam to be moved. Wear on the two feed driving mechanism or improper adjustments can also cause the bolt cam operating cam to move too early or too late, which has the same effect as though the cam were improperly set. Ordinary wear as a rule causes the operating cam to act too late rather than too early, and for this reason it is necessary at times to re-set the bolt cam operating cam. If for any reason it becomes necessary to re-set the operating cam, it can be done in a few minutes and all *guess work* in connection with its proper setting can be eliminated.

Proceed in this manner: Turn the machine by hand until the feed cam is fully in and draw thread knitting has begun; continue to turn by hand until the ratchet wheel has made a full stroke on the move preceding the last one which takes the draw thread out of action. At this position of the ratchet wheel (302780) set the bolt cam operating cam (203440) so the double feeder slide (203450) will be off the step on the operating cam and about 1/16-inch past the step off point. This position of the bolt cam operating cam will assure getting the feed cam out in the long butt sliders in ample time to clear the medium butt during the draw thread knitting.

Once the operating cam is set properly at this point it will be correct at every other point since there is ample leeway for the feed cam to operate when going onto the heel and off and onto the toe. The close place is the move preceding the one which completes draw thread knitting. We shall consider the relationship between the bolt cam operating cam and upper bolt action at a later date; for the present may we say that insofar as *timing* is concerned, the position suggested will be correct for both upper and lower cylinders.

Yarn Clamp and Cutter Blocks

All two feed Komets are equipped with two complete yarn clamps and cutter blocks (203460), both exactly alike; one of them takes care of the draw thread and the other the two feed yarn. One complete yarn clamp and cutter block assembly is shown in the accompanying illustration. We have referred to clamp and cutter blocks briefly in connection with feed finger movement and adjustments, however, since these parts have more or less to do with two feed knitting problems, we shall attempt to give some additional information about their care and adjustment.

Keep the draw thread clamp and cutter block set in as near to the sliders as possible and make sure it will clear the sliders during heel and toe knitting. Set the trapper body bracket (203453) so the draw thread clamp and cutter block will be swung in as near to the sinkers as possible. This setting will vary with diameters since sinkers do not rock out in the same place on the double feed side on all diameters. Notice the settings on new machines as they come from the factory and you will see the difference.

The time required to get the draw thread or double feed yarn from feed position into the yarn clamp will also vary according to diameters. On any diameter make sure that the draw thread yarn clamp does not press against the outer surface of the latch guard when the clamp is fully open. The closing time of the draw thread clamp is not as important as the opening time. It matters little if the end when cut off be a trifle longer or shorter—it matters a great deal whether or not the end is released at the proper time.

The operating cams for both yarn clamps should be timed so the ends will be released before the yarns are pulled taut by the needles. Holes will result if this timing is too late.

In setting the adjusting screw (303806) in lever

(203462), do not go to the extreme so that spring (302802) will be fully compressed; broken trapper slides and broken or bent adjusting screws will result if excessive pressure is used.

Sometimes we find that when a yarn clamp closes on the draw thread or two feed yarn it will pinch the yarn off completely and fail to hold it in the clamp. This, of course, means a press-off when the feeder swings into feed position again. Very often this occurs when changing from a mercerized yarn to cotton or from any high twist to soft yarn. This trouble can usually be traced to the yarn clamp (203465); very often it shows up when replacing a yarn clamp which has been damaged or broken. It is caused by a sharp edge on the upper side of the yarn clamp and can be corrected by rounding off the upper edge with a fine die-maker's file or a thin knife blade shaped oil stone.

When the yarn clamp closes it first clamps the yarn between the upper surface of the clamp and the body of the block; after the yarn has been clamped the under side of the clamp and the top of the clamp guide (203464) do the actual cutting. Rounding off the upper edge of the yarn clamp will give it a chance to pull the yarn down between the clamp and body of the block and prevent pinching off before cutting takes place. When the slot or hook on the clamp is cut square across, it simply acts as a cutting edge on both sides.

Regrinding or sharpening the upper surface of the clamp guide to make it cut better usually does more harm than good. It is truly remarkable how well the clamp and cutter blocks work and how little attention they actually require when we consider what they do.

In setting the double feed clamp and cutter block, make sure that neither the body of the block nor the clamp when fully open can come in contact with needle latches as they pass by. Here again diameters of the cylinder make a difference; on large diameters closer settings are required and the clamp and cutter block must be set in as near to the needles as possible; on small diameters we seldom have trouble with needle latches striking the clamp or cutter block.

The best way to avoid bent latches when it becomes necessary to re-set a clamp and cutter block is to raise a needle latch directly in front of the block by hand and check for clearance. Remember the needle latches really move when your machine is running at top speed so make allowances for this when making adjustments. Keep the double feed yarn clamp swung in toward the cylinder as far as possible; this is especially important on large diameter machines. On these we find it more difficult to keep the yarn clamps open long enough for the yarn to enter, especially when going onto the heel. Also, in going from heel to foot it is more difficult to release the yarn soon enough on large diameters than on small. Remember, the farther away from the cylinder the clamp and cutter block are swung the farther forward it will have to be set, which means it will take longer, all things considered, for the yarn to reach the cutter block when it swings out of action.

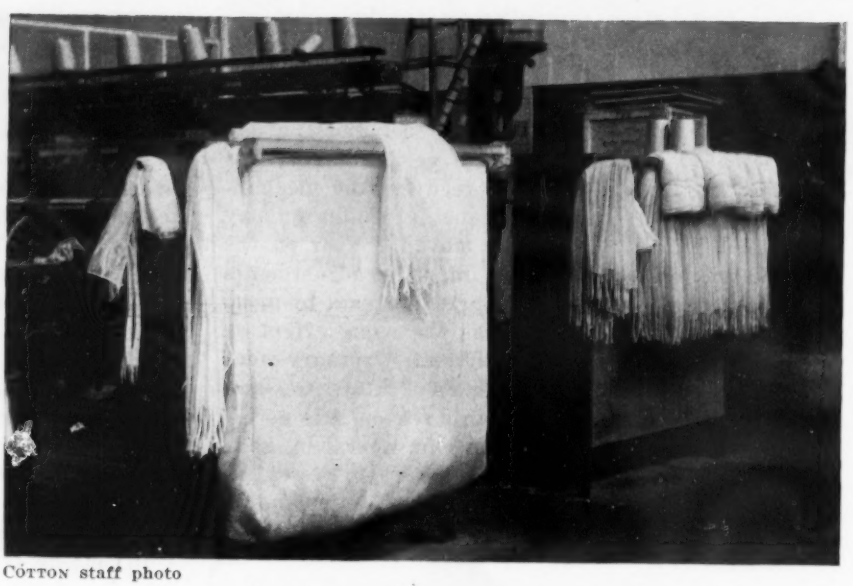
After all, both yarn clamps must be set more or less in relation to cylinder movement, for cylinder movement alone determines the time when yarns reach the clamp and cutter and when they must be released by them.

And last but not least, let's not forget the one important detail that has much to do with many of our fixing problems—lubrication. Some light cup grease applied to operating cams on the vertical shaft will help a lot and a few drops of oil weekly on the slides, clamp and cutter parts, feeder pivots and shafts—and don't forget the oil hole in the draw thread bracket.

K. O. METZ

Method of Handling Nylon Hosiery

NYLON presents new problems to hosiery manufacturers. It must be handled more carefully than tram silk to prevent its being picked and pulled. Here may be seen a method employed by one mill to store the nylon blanks at the knitter's bench. The knitter's bench at the left in the photograph is equipped with a white canvas bag so that the dozens may be laid lengthwise in it, thereby protecting the delicate fabric from passers-by and eliminating pull threads. This system also prevents creasing of fabric and permits the nylon legs to lie stretched out smooth. At the right in the photograph may be seen the usual method of handling tram silk hosiery.



COTTON staff photo

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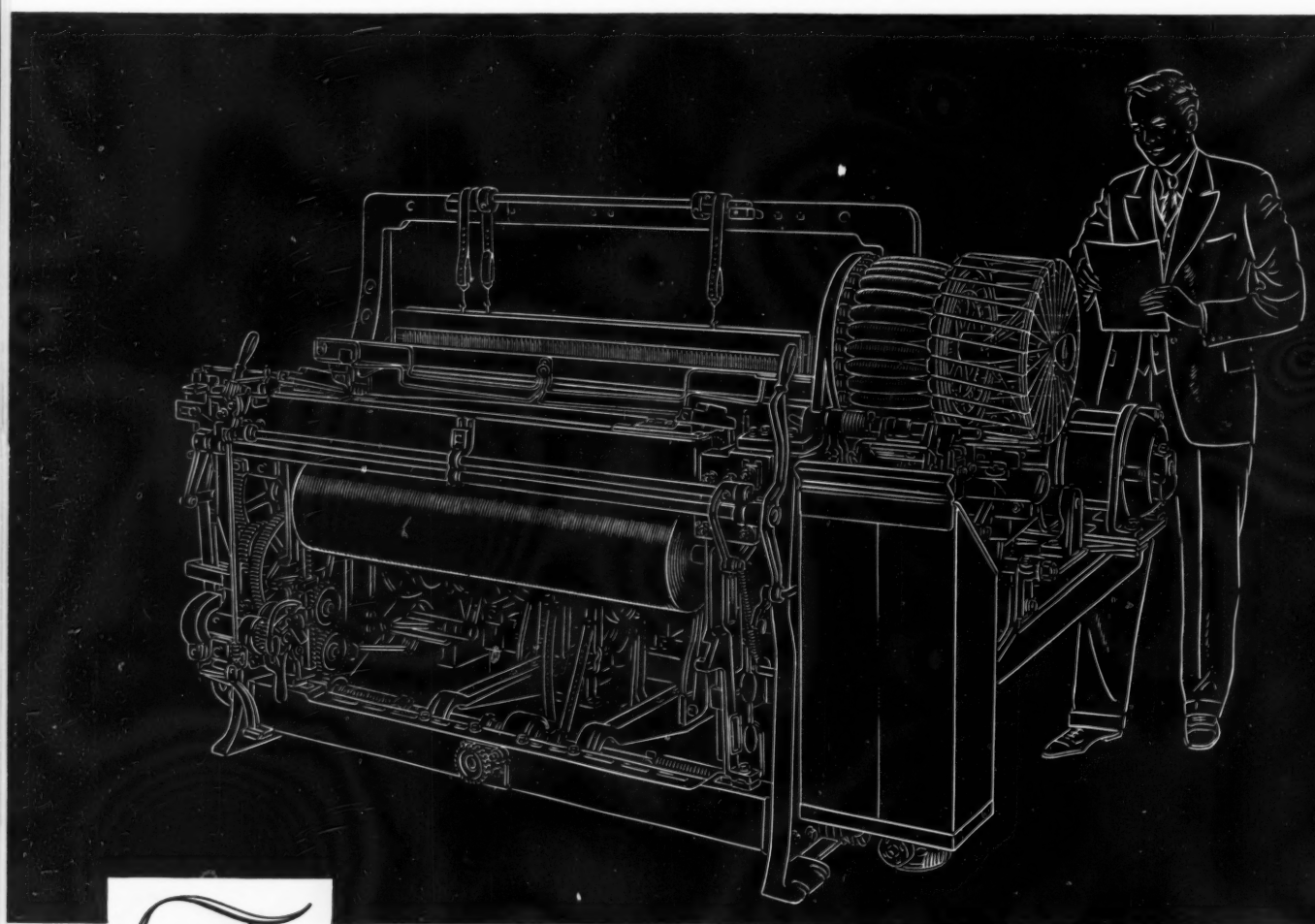

1866 — 75 YEARS OF MANUFACTURING PRECISION PRODUCTS — 1941

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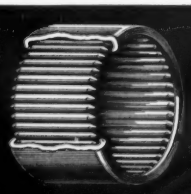


Compressed Air Removes Rubber Top

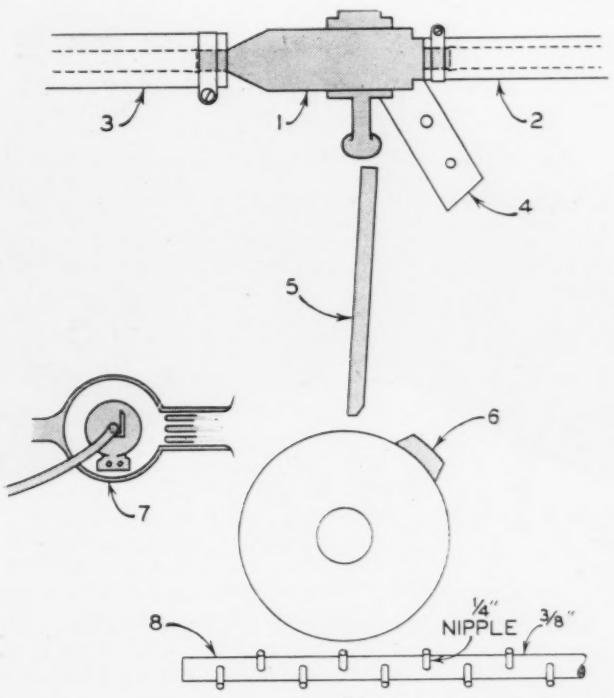
EDITOR COTTON:

We have overcome a problem on our automatic ribber top machines and perhaps it will be of interest to other seamless manufacturers.

On our 2½-inch to 3-inch machines making infant hose, we could not get the hose to drop out of the machine when they had finished making the sock, so that the machine could make up and start out on another top.

We discovered that we could use compressed air to blow the hose clear of the cylinder when they cut out, so we made an application of compressed air so that it would operate at the proper time and blow the hose clear.

Our knitters were operating from 12 to 14 machines each, with a production of from 55 to 70 dozen per 8-hour shift. Since we have been using the compressed air device to blow the hose out, our knitters are operating from 20 to 22 machines each, and their production is from 120 to 135 dozen per 8-hour shift.



In case other mills wish to install a device to blow the hose out, I will give a sketch of the way we are doing this. See sketch.

No. 1. Air valve commonly used in knitting rooms on air hose to blow lint off machine.

No. 2. Air hose from line running from air compression to back of machine, just over drive shaft "8".

No. 3. Automobile air pump hose from air valve to center of needle ring.

No. 4. Bracket welded to air valve "1" and fastened to yarn stand at back of bracket post.

No. 5. Thrust bar extended from thumb valve "1" to regular drum.

No. 6. ⅝-inch cam comes under thrust bar "5", as machines move to cut out finished hose causing thumb valve on "1" to be raised, releasing air and blowing clear of cylinder. ⅜-inch cam "4" passing on from under thrust bar "5" closing air valve until another hose is made and cut out.

No. 7. Tube valve stem inserted in ¼-inch hole drilled in center of yarn clamp and shear bracket.

No. 8. ¾-inch pipe.

CONTRIBUTOR No. 7221

Loose Chains and Gears on Full-Fashioned

EDITOR COTTON:

Too little attention is given to loose drive chains and driving gears, and since this is a major cause for various troubles on a full-fashioned knitting machine, they should be checked more frequently.

Often a machine will be cutting or even making narrowing menders when there seems to be no apparent cause. In the case of cutting, sometimes every setting seems just as it should be, the needles seem to be set at the proper height, the knocking-over bits set as they should be, the catch bar right, and possibly there is no evidence of sharp needles, sinkers or knocking-over bits, yet the cutting will continue. The same is true of narrowing menders. Sometimes the narrowing fingers are set perfectly and fit the needles just right, and still narrowing menders and picot menders continue to make their appearance.

Needless adjustments are often made to correct these troubles, but in many instances the cause of the defect can be found in a loose drive chain or gear. The reason for this is that when a chain or gear is loose, the machine will move in jerks, as the slack must be taken up before the machine starts to move, and there are times while the machine is in motion that it turns hard and times when it turn easy; the slack is taken up on the hard pull and released on the easy pull. Thus, at times the machine jumps ahead of itself and then again holds back when it should be going ahead.

This can readily be seen when the machine is turned by hand into the narrowing motion, as the narrowing machine will appear to jump and then stop, and then jump again into position.

All this tends to destroy or disrupt the natural or intended motion of the machine, causing unnecessary trouble.

One can easily detect a chain that is too loose or a gear that rocks on its shaft by releasing the safety backstop on the machine and turning the handwheel backward and forward. If the handwheel shaft rocks either way without moving the machine, then it is time to make the drive chains as tight as they should be, and to make the driving gears tight on their shaft.

CONTRIBUTOR No. 7222

Knitter Hints
(No. 4)

Don't be a "Cone-Stripper"

(Even if the boss is not looking, it still costs everybody money.)

"Knitter Hints" Nos. 1, 2 and 3 appeared in April, May and June issues

Photo, John C. Fonville of COTTON

TRENDS AND HIGHLIGHTS OF THE KNIT GOODS MARKETS

Rise in Raw Silk Makes Full-Fashioned Hosiery Harden with Conservative Advances Due—Government Ceiling in Combed Cotton Yarns a Restraining Factor to Further Advance Affecting Seamless and Half-Hose Mills—Half-Hose Prices Advanced—Hosiery Shipments This Year Considerably Ahead of 1940—Underwear Mills Rushed

June 16, 1941

SHIPMENTS in the hosiery industry so far this year have been about 10 per cent ahead of the same period a year previous but the full-fashioned end of the business has not participated in the upturn to the extent some other branches of the industry have. In general the men's end of the business has been much more active than women's and children's numbers and this is due in large part to the large amount of hose being taken by the Army and Navy. Silk's advance over the last month has brought to the fore the question of the mills getting more for their goods but with June showing to date a smaller consumer demand this has not taken place as yet except in the low-end merchandise and here it has been conservative. Seamless lines and half-hose are strong in price and in many instances the mills are sold as far ahead as they care to at present. Underwear mills also have about all they can handle in the way of orders in hand.

Full-Fashioned

Raw silk prices early in June were up about 45 cents from the low of a few months back and this should mean an advance of 25 to 30 cents a dozen in the price of full-fashioned hosiery but manufacturers have been slow to place increases in effect. They complain that this end of the business has not been good in most sections of the industry so that the time is not ripe to get as high prices as the raw rise warrants. Shipments of women's full-fashioned hosiery in the first four months of this year were up 10.6 per cent compared with the same time a year previous and out of approximately 14,376,000 dozen pairs of women's full-fashioned, nylon shipments alone were slightly more than 2,000,000 dozen pairs. There is little doubt but that full-fashioned prices will have to go up somewhat over the next couple of months if silk stays where it is or advances further because current hosiery prices were based on silk around $2.50 in instances whereas this commodity is now over the $3.00 level.

Half-Hose

This has been one of the most active sections of the hosiery industry this year with shipments in the first four months averaging 18 per cent ahead of the same period in 1940 and in the case of seamless wool shipments they are up 284 per cent. This exceptional increase is explained by the large amount of such goods that is being taken by the Army and Navy. Only one section of the half-hose industry shows a decline in shipments and that is silk with the larger decline in full-fashioned and the smaller one in seamless half-hose. Seamless rayon and cotton both showed nice gains with the larger in cotton and explained by the large amount of such lines bought by the Army.

Price advances averaging 10 per cent in the retail end have been placed in effect on fall lines by leading manufacturers of men's branded half-hose including the Interwoven Stocking Co., Westminster, Ltd., and Phoenix Hosiery Co., the latter as far as its wool lines are concerned. The advances were brought about by recent increases in cotton and mercerized yarns and general mill costs. Higher government wage rates go into effect September 15 but it is expected that bulk of the fall production will be out of the way by that time. Some of the lowest priced half-hose on the retail shelves are expected to disappear altogether while advances will have to come shortly in all other numbers.

Seamless

This end of the market has not been the most active and has been lagging behind the rest. Shipments of women's seamless during the early months of this year were off 6 per cent compared with the same period a year previous but in anklets shipments have been slightly higher. There are several new developments in this end of the business that give promise. One of these is the introduction of colored stockings and sheer blacks, coming in seamless as well as in full-fashioned. Leading fashion magazines have been featuring these and leading retail outlets in the large cities of the country have been displaying them with good results. Another promising development has been the introduction of seamless nylon stockings and several large outlets have had these around $1.25 retail. Manufacturers look upon this with hope and several makers of full-fashioned say they plan to go into the seamless nylon end. The price situation is strong due to higher costs of manufacture including upturns in cotton, wool and silk and coverage ahead has been apparent, coming from large buyers who want to beat coming price advances and also to be sure of having the goods in stock later on this year.

Underwear

Manufacturers of underwear have more orders than they can handle in most instances so that it is a question of alloting deliveries for the rest of the year. During the first four months of this year manufacturers of knit wool and cotton underwear produced 15 per cent more than in the same period a year previous but at the end of April the unfilled orders in hand were about twice what they were a year previous. Part of this activity has come through the large amount of goods being bought for the armed forces of the country and still larger amounts are to be bought for the Army. In this connection the latter in June for the first time accepted bids on cotton knit garments made from carded yarns of high grade. Previously the Army would accept underwear of this type made only from combed yarns and the change was made in view of the sold up position of combed mills.

Most underwear mills feel the Government setting a ceiling in combed yarn was a desirable feature; they feel that it will tend to stabilize underwear prices also to a degree. Civilian buyers are becoming more concerned at their inability to obtain early deliveries and this is now applying to orders for fall lines as well as for lightweights for spring and summer. Costs of manufac-

turers have increased so fast that most agree they are not as well off so far as profit margins go as they were at the spring opening when goods prices were considerably lower.

Gov't. Combed Yarn Ceiling Affects Knitters

Telling the Senate Committee on Agriculture and Forestry that Army requirements in cloth, underwear and socks had become a problem as early as October 1940, Leon Henderson, administrator of the Office of Price Administration and Civilian Supply, declared that his imposition of a ceiling on combed cotton yarn prices would both minimize speculation and induce full use of both combing and twisting equipment. After citing the facts that 30s single had increased in price by approximately 65 per cent from August 1940 to May 17 of this year, Mr. Henderson emphasized that such an advance had not, except to a limited extent, been necessitated by increases in the cost of cotton. His statement failed to appease representatives of the cotton States and the action also failed to meet the approval of combed yarn spinners who declared that not only had the ceiling been set too low but that the differentials on some sizes were greatly inadequate.

According to Lew Hahn, general manager of the National Retail Dry Goods Association; "Retailers like other business groups, are opposed to Government price fixing, but we are obliged to recognize that the cotton goods industry has had several significant warnings and so far as results are concerned, seems not to have taken the situation seriously." He added that the imposition of a price ceiling on combed yarns should be accepted as a decidedly bearish influence on the cotton goods trade.

President Roy Cheney of the Underwear Institute, early in June declared that "several unusual situations with regard to the sale and delivery of yarn have recently come to the attention of the institute. The first has to do with the attempt of some yarn people to increase their contract prices to the ceiling set by Henderson. This is, of course, unwarranted. Next, it has come to our attention that some yarn sellers are attempting to get prices beyond the ceiling set by Mr. Henderson on the ground that their yarns are special types of a higher quality. In cases of this kind it may be necessary for the yarn seller to prove his case to Mr. Henderson and to get a special certificate to that effect before imposing an increase on prices on the underwear mills." He added that it may be that underwear manufacturers will have to request the imposition of priorities on yarn sellers and if further necessary request the allocation of production of certain yarn sellers to Army, Navy and Marine Corp contracts at prices to be fixed by the Government. In general the underwear market viewed the ceiling as a favorable development, having the tendency of stabilizing prices.

FORECAST

(Opinion submitted by COTTON's market correspondent)

Philadelphia, June 16, 1941

PRICE CEILINGS and priorities for textiles being manufactured for the Government are in prospect in the very near future. Indications are there will not be enough production of many lines for use by the armed forces of the country and for normal civilian demand which means that textile manufacturers will be among those who if they have not already done so will have to make major adjustments in their business. Manufacturers are going to find themselves confronted with the demand to do a large volume of business with a small profit margin and many luxury items in their lines will have to be discontinued for the term of the national defense drive.

During the last month the Government issued ceiling prices for combed cotton yarns and early in June mercerizers came out with a new list based upon the Government combed list. This means that prices of these yarns are frozen at this level until producers can prove that they have had additional costs in which event the Federal Price Administrator would re-examine their claims. Other textiles may feel the effects of this and the general trend will be to stabilize prices.

If prices become more stable this will not mean that forward coverage in raw materials and yarns will become less marked. With business activity in this country at all-time peak rates and with the President indicating that the national emergency may last for several years this means manufacturers may with justice carry larger inventories than they did a year back. In many lines it is no longer a question of price but of getting delivery and with this to continue there is going to be no let-up in demand as far ahead as sellers will accept. As the Government takes more production for its armed forces the civilian trade will have to make more important adjustments than ever before. A large volume of business, with prices strong but advancing only very slowly due to Government controls and small profit margins are ahead.

New Hosiery Rules Effective July 15

Trade Practice Rules for the hosiery industry in process of formulation since the fall of 1937, have been officially approved by the Federal Trade Commission and for effect on July 15. The tentative draft of the rules on which a public hearing was held last November has been followed for the most part although there are some additions and amendments to which attention is called by the National Association of Hosiery Manufacturers. It states in this connection that there is a standard or definition of "lisle" for the first time. The lowest count qualifying for this description is a 30s count, and the cotton used must be long staple. In the final draft of the rules it is permissible to use a staple of an inch and one-sixteenth in the 30s and 35s counts. Minor changes are also noted in minimum twist requirements of the highest counts.

It is noted that the "crepe" standard developed five years ago and which has been generally accepted by the industry is incorporated in the final rules. It is not necessary to disclose the fiber content of each item entered on an invoice provided the invoice carries a statement that the seller warrants each and every item coming under the rules is properly marked and labeled as to content in conformity with the rules. Hosiery containing any kind of wool is governed by the Wool Products Labeling Act but such hosiery shall not be deemed to be relieved of the necessity of complying with this or any provisions of the hosiery rules which relate to matters not covered in the wool labeling act. Hosiery which are irregulars, seconds or thirds must be conspicuously marked to this effect. The rules do not apply only to the manufacturer but govern with equal force the converter, processor, dyer, finisher, distributor, dealer, importer, vendor or any person acting for any of these.

Fall Hosiery Colors Tend to Darker Shades

The introduction of a number of darker colors in the 1941 fall hosiery color cards is regarded significant by the Textile Color Card Association. Attention is called to Brown Butter in the new list which is described as a warm, rich tone of light brown. It is linked with the smart golden and sepia browns in fall costumes as well as with lively greens of golden cast and the darker pine leaf or timber versions. The introduction for the fall of an off-black called Black Rhythm is also stressed as a feature of considerable importance. There are eight new hosiery tones in all on the fall card all of which can be duplicated on nylon. They are in addition to Brown Butter

TO STEP UP *Profitable* PRODUCTION

With full-fashioned hosiery sales going steadily upward and an ever-increasing demand for fine gauge silk and nylon hosiery, the hosiery manufacturer faces two problems. First, he must increase his production capacity without over-expanding. Second, he must increase his *profitable* production by reducing his percentage of "rejects" and "seconds," which normally runs higher on the finer gauges.

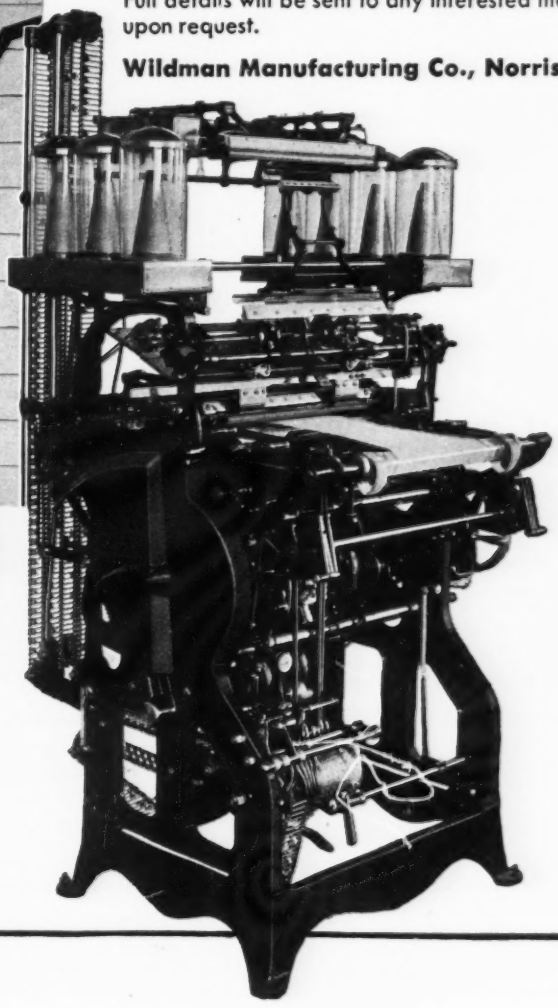
The Wildman Single-head, Single-unit Full-fashioned machine is the answer to both these problems. First, *it offers a rate of production unequalled by any other machine.* Second, *it reduces the number of "rejects" and "seconds" to a minimum* because it provides a perfect match of the leg and foot. The bad matching with leggers and footers, particularly noticeable on fine gauge hosiery, is entirely eliminated with this revolutionary Wildman Single-unit machine, because the entire stocking is knit in one continuous operation.

Ease of operation, permitting quick training of inexperienced help . . . ease and speed of installation, eliminating delays and disturbance in operating schedules . . . are among the many other important advantages which make this machine so desirable. Full details will be sent to any interested manufacturer, upon request.

Wildman Manufacturing Co., Norristown, Pa.

WILDMAN

Single-head, single-unit full-fashioned hosiery machine



already mentioned: Honeycomb, a darkened beige; Suncharm, a warm, sun baked tan; Cocobark, a smart brownish beige; Wineblush, a glamorous rosy cast beige; Aerobeige, a subtle neutral tone; Smokehaze, a distinctive taupe tone beige and Black Rhythm, an alluring off black.

Three-Thread, 45-Gauge Most Popular Type

The most popular construction of women's full-fashioned silk stockings in a recent month was 45-gauge, three thread, which represented about 33 per cent of the total goods produced in that month, according to a summary made by the National Association of Hosiery Manufacturers. About 44 per cent of all nylon full-fashioned hosiery produced during the same period was 45-gauge, 40 denier,, construction and 25 per cent was 51-gauge, 30 denier. It is pointed out that two and three-thread 45-gauge constructions have steadily increased in importance in the last five years and now cover 38 per cent of the total. On the other hand 42-gauge, three-thread and 42-gauge, four-thread type which now gradually less important and were in March 1941 only 18 and 13 per cent of the total respectively. Of further interest is the rise in importance of the 45-gauge, four-thread type which now accounts for about 11 per cent of the total. In the case of the 39-gauge, four-thread, volume was only one-half of what it was in March a year ago.

Agreement Reached In Apex Hosiery Case

A compromise by which the Apex Hosiery Company suit against the County of Philadelphia and the American Federation of Hosiery Workers would be settled for a cash payment of $125,000 has been agreed upon. The County would pay $15,000 of this amount and the union $110,000. Suing the union for damage done by strikers at the plant and the County for failure to provide police protection, the company originally won a verdict of $711,000 in the United States District Court which was invalidated by the Supreme Court which ruled that damages could not be collected under the anti-trust law. Branch No. 1 of the hosiery union, the Philadelphia local which staged the sit-down strike at the Apex plant in May 1937 is reported to be prepared to pay its $110,000 share and at the annual convention of the hosiery federation held in Philadelphia it was decided that Branch No. 1 of the union should not bear the entire expense but that the amount would be raised by the entire membership of the national federation. The $125,000 settlement is reported to be satisfactory to the insurance companies involved which have already paid an estimated $141,000 to the Apex and therefore to receive the bulk of the settlement payment. A settlement would close the books on a four-year litigation which began with the forcible entry of 5,000 into the plant in the sit-down strike which ended after an injunction had been issued by the Federal courts here.

An Eye on the Knitting Mills

Operations have begun at Delavan, Wis., in the plant of the former Bradley Knitting Company. The mill has been taken over by the newly organized Bradley Division of George E. Borg Corporation of Chicago, manufacturers of men's and boy's sweaters. Walter E. Hess of Milwaukee, and for 22 years with the former Bradley firm's Milwaukee division, will be general manager.

Marlee Full-Fashioned Hosiery Mill, Gibsonville, N. C., has been reorganized as Ingle Full-Fashioned Hosiery Mills, Inc., with J. C. Bolles of Rufus D. Wilson, Inc., Burlington, N. C., as president and Lee H. Ingle, formerly with Marlee as secretary and treasurer.

The following equipment has been sold through Morris Speizman, Charlotte, N. C.: Ellis Hosiery Mills, Hickory, N. C., two Zephyr extractors; Whisnant Hosiery Mills, 48-inch extractor; Hildebran (N. C.) Hosiery Mills, Zephyr extractors.

It is understood that Samuel and Irving Greenberg are president and treasurer respectively of a new mill to be located at Fall River, Mass., the name of which is Bristol Knitting Mills, Inc.

Dolly Hosiery Mill, Valdese, N. C., has moved into new quarters and it is reported that the concern will eventually double its capacity for manufacturing infants' hosiery.

It is reported that Marlyn Mill, Inc., a New York concern, will operate the plant of the Lengel-Fencil Hosiery Compay, Anniston, Ala., which closed in 1938 during a labor dispute.

Vanity Fair Silk Corporation, Jackson, Ala., has installed new equipment consisting of 20 machines for knitting rayon and silk fabric for the manufacture of women's underwear.

Pittsford Knitting Mills, Inc., Detroit, Mich., is a new mill formed by Alfred A. Lauppe and associates, to operate a plant to produce outerwear.

John Rems & Sons, Macungie, Pa., manufacturers of knit underwear, will build a one-story addition to cost about $50,000 with equipment.

Warren Knitting Company, Inc., Ballston, N. Y., has been granted papers of incorporation, with authorized capital stock of $50,000.

The Kernersville (N. C.) plant of Adams-Millis Corporation will be enlarged, according to officials of the organization.

C. C. Clontz of Hickory, N. C., has installed machinery in a mill at Goldston, N. C., where rayon and cotton half-hose will be manufactured.

Paragon Knitting Mills Company, Philadelphia, Pa., will build a 48x120 foot addition to the warehouse.

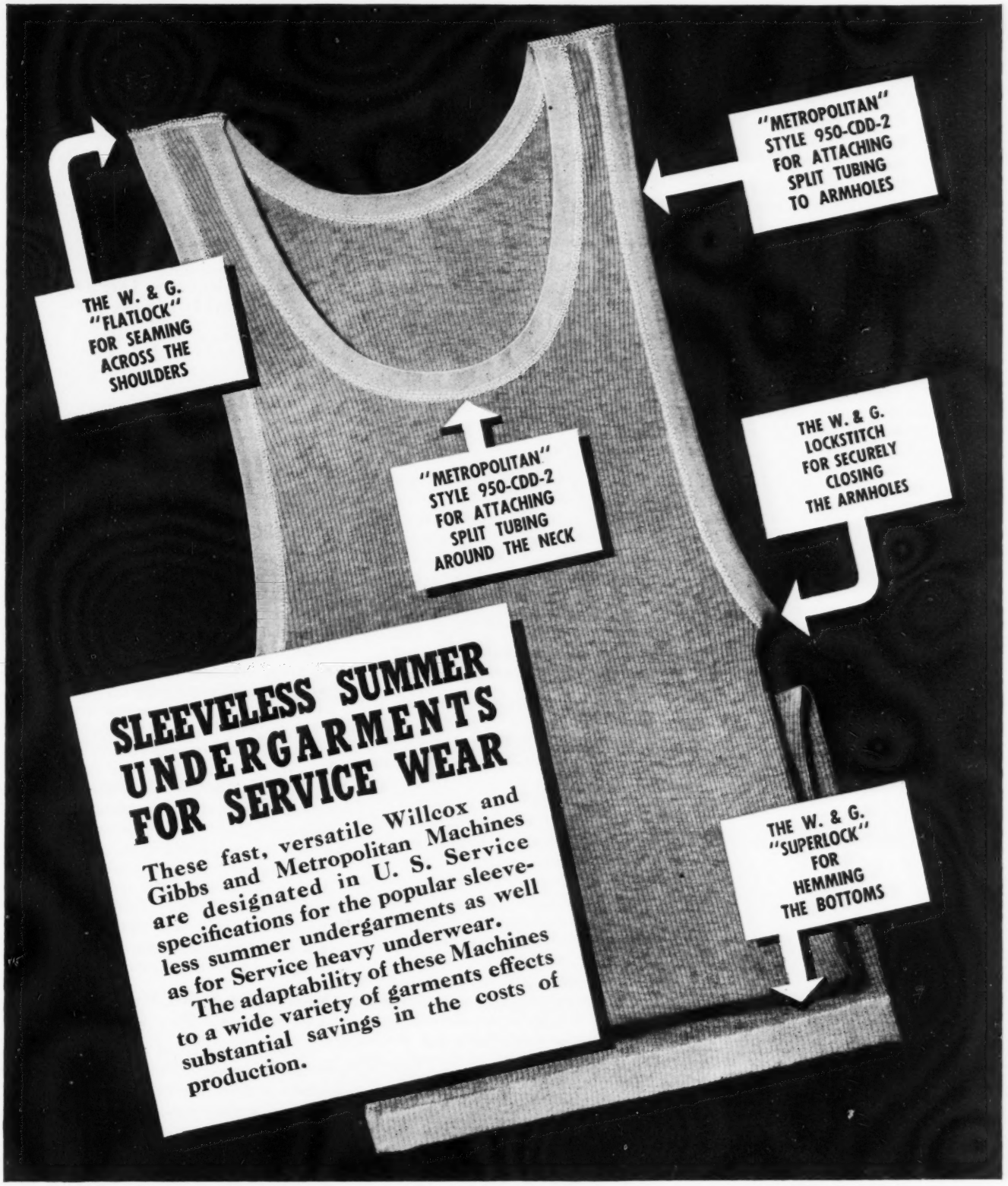
Misses Lois and Mamie McAffee are building a new hosiery mill at Granite Falls, N. C.

Half-Hose Shipments Reach High Level

Directly influenced by Army orders arising from the national defense program, April shipments of seamless wool half-hose were 589 per cent over deliveries a year ago for a total of 222,877 dozen pairs as compared with the 1940 months' total of only 32,341 dozens pairs. This spectacular gain in a division, that had been one of the most inactive, contributed to a record for April hosiery shipments, the total of all types rising 25.7 per cent over the same month last year. Next to the wool gain, men's bundle goods registered a rise of 87.6 per cent over April of last year, volume rising to 500,922 dozen pairs as compared with 266,948 dozen pairs in the 1940 months. For the first four months of this year shipments of half-hose and slacks were 17.9 per cent over the same month a year previous. The National Association of Hosiery Manufacturers reports that 48,628,543 dozen pairs of hosiery of all types were shipped during the first four months of this year compared with total shipments of 44,167,662 dozen pairs during the first four months of 1940.

New Jute Socks For Army Use

The Quartermaster Corps of the Army under date of May 7, 1941 has issued specifications for a new type sock made of jute which is to be worn by troops in cold regions. They are to be made in four sizes, small, medium, large and extra-large and the yarn is to be made from a good quality soft strong unbleached jute fiber with the yarn thoroughly cleaned and twisted with a soft knitting twist about three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to four turns per inch and to be a 20-pound or a 16-pound jute yarn. The sock shall be seamless, circular knit on a machine having not more than 54 needles and cylinder of not less than 4½ inches in diameter with the leg, heel and toe being knitted with a plain knit stitch. The top shall be finished by overlocking with a three-thread stitch with not less than 14 stitches per inch and from the top to the lower edge of the heel shall measure 10 inches. The socks are to weigh as a minimum from 2¾ to 3½ pounds per dozen pair.

Throwing Prices Up About 12 Per Cent

Price increases averaging about 12 per cent on basic one-way twist of silk hosiery yarn have been put into effect by a number of throwsters who declare their costs other than labor have gone up about 8 to 10 per cent in the last six months and that wages have been moved up over this period in a number of plants as a result of union contract requirements and competition for labor from plants working on defense contracts. Throwing interests claim that the higher prices now quoted by some mills are actually lower than quotations which were in effect when the 32½ cent minimum wage for the industry became operative. A new minimum of 37½ cents an hour under the Wage-Hour Law has been unanimously recommended by an industry committee appointed to study the subject and will probably become effective in the very near future.

Berks County Produces 20 Per Cent of FF

Reading, Pa., and Berks County in which that city is situated are making about 20 per cent of the nation's full-fashioned hosiery, according to a statement of the Wyomissing Industries. The United States leads the world in the production of full-fashioned stockings and Pennsylvania produces 42 per cent of the nation's total with the Reading area responsible for 45 per cent of the production in Pennsylvania. In an article in the Yarn Carrier it was stated that "During the past few years there have been many significant changes with respect to the relative importance of producing areas in the industry. The relocation of mills from the Philadelphia area to other sections of the country has given Reading clear title to the honor of being the largest producers of full-fashioned stockings. The only other area rivaling Reading's production is the state of North Carolina. However, North Carolina comprises an area 60 times that of Berks County in square miles and consequently really not comparable."

Price Administrator Surveys Raw Silk Situation In N. Y.

Raw silk prices, availability of supplies, condition of stocks and possibilities of shortages developing in some grades have been the subject of an inquiry which the Office of Price Administration and Civilian Supply has initiated in New York. It was pointed out in this connection that there will be a considerable increase in parachute requirements next year due to the expanded heavy bomber program. At the present time parachutes, parachute harnesses and ropes, parachute flares and cartridge bags, the main defense uses for silk, accounts for only a very small proportion of the monthly silk consumption. Its inquiry into the raw silk situation is believed to be in line with the OPACS policy of keeping an eye on all materials needed for the defense program lest unjustifiable advances be made in prices. So far no textile material except combed yarn has had a price ceiling put over it. Several sellers and users of raw silk stated they had so far held only informal talks regarding this with representatives of the OPACS.

New Process Is Claimed Adding To Hosiery Wear

United States Rubber Company has announced the development of a new process named "Kolok" which chemically rivets men's socks so that they will wear, it is claimed, up to three times as long as ordinary socks. It is claimed that in laboratory tests woolen socks treated by the process survived three and a half months of daily wear for fifteen hours each day withstanding laundrying ninety times in this period. Chemists of the company further claim the socks so treated eliminate shrinkage almost completely. The new process it is stated will be made available under license to manufacturers of men's hosiery. The socks are not yet available to the general public but production has begun and public sale will commence soon. The results are achieved it is stated by immersing the fabrics in a bath of certain collodial substances suspended in water.

New Interest In FF Lisle Hose

Interest is being shown in new numbers of fine gauge full-fashioned lisle stockings which are being shown in several of the large New York department stores. One has a number of a kind at $1.95 a pair of English manufacture which is not only of sheer construction and regular net mesh knitting, but can be had in light shades comparable to those in full-fashioned silk. It is noted in particular that the yarns used in making such numbers are especially fine to give the desired sheerness which heretofore has been lacking in lisle numbers made in this country such as those promoted by the Department of Agriculture under style No. 106. Coming at this time when relations with Japan are a subject of discussion the new full-fashioned lisles take on more importance than any time since the last move toward a boycott of silk stockings several years ago.

Seamless Nylons Attract FF Hosiery Interest

Because seamless nylon hosiery would cost them only slightly more than half as much to produce as the full-fashioned styles in view of the smaller machinery investment and lower labor rates, hosiery mills which until now have engaged exclusively in the manufacture of full-fashioned merchandise are beginning to demonstrate an active interest in the nylon seamless production. It is stated that at least three mills have arranged for experimental equipment for a test run of 400-needle stockings but delivery of such machines against new orders is understood to be impossible before next October. Although circular knit nylon stockings are now being made on machines with as few as 320 needles, most full-fashioned firms believe that the trend in this type production will be toward the finer needle styles. Reports indicate there are no more than perhaps a half a dozen 400-needle machines in operation at present but it is pointed out labor costs are considerably lower on seamless production with other savings compared with full-fashioned possible. For the present if the seamless nylon production is expanded the yarn will have to be obtained by diverting some of that now going into full-fashioned hosiery.

New Half-Hose Prices Average 10 Per Cent Up

Prices being quoted on the fall line of men's hosiery by several large producers average about 10 percent higher than a year ago. These increases mean an advance of 5 cents a pair in the resale prices of the popular 35 and 50 cent numbers. These advances by manufacturers will mean changes in the retail level in all type goods but its effect will be most keenly felt in the low-end merchandise. It is believed that current experiments in the chain stores on repricing merchandise from 15 to 17 cents, for example, will not solve the problem of passing these mill cost advances on to the public so that further increases in such goods are looked for as the only answer to this question. These cheaper goods are

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made almost solely in the South which will feel most heavily the effect of the recent seamless hosiery agreement to raise minimum hourly wages of workers from the present base of 32½ cents to 36 cents on September 15. Ten cent hosiery lines, producers are pointing out may begin to disappear from the counters next fall although some of the larger buyers have covered sufficiently far in advance to allow for retailing at that price to the end of the year.

Hose Association Advocates Labeling Single Fiber Goods

National Association of Hosiery Manufacturers states that it is a sound policy to label all single-fiber goods and stockings made entirely of wool or rayon coming under rules for their specific industries which require that the fiber must be revealed. In the case of all nylon it is stated to be not only advantageous to disclose it but the conditions under which the yarn is purchased require it. On all silk stockings the association recommends labeling because it enhances the value of the product and protects the manufacturer from any charge of misleading by nondisclosure. All cotton stockings are usually easily identified by their appearance the association said and the identification can be dispensed with but at the manufacturers risk.

Underwear Mills Have Large Volume Booked

Orders on hand with underwear manufacturers have increased substantially to date compared with the corresponding period a year ago. According to the last Government report, in the knit cotton and wool division unfilled orders with manufacturers at the end of April amounted to 6,521,000 dozens compared with only 3,713,000 dozens a year ago. In the woven division unfilled orders this April were 968,000 dozens which compares with 557,000 dozens a year ago, while in the circular knit rayon unfilled orders this year were 139,000 dozens compared with 65,000 dozens a year ago. For the first four months of this year production of knit cotton and wool underwear amounted to 8,363,000 dozens compared with 7,231,000 dozens for the same months of last year so that the gain has been 15 per cent this year.

Cut In Nylon Yarn Prices Indicates Future Trend

Although the reduction in nylon yarn prices announced by the du Pont company June 16 was not extensive it indicates that as with all inventions the future price trend will be downward as production of this man-made wonder fiber expands. Manufacturers using this yarn pointed out the reduction would not mean more than 2 per cent in some sizes and less in others. It has been estimated the cut will mean about ½ cent per pair of stockings. At the same time du Pont announced that the yarn would be sold without discount as was done in the case of its rayon filament yarns which added slightly to the cost to manufacturers as compared when the discount was given. Lower prices for nylon, which are sure to come, will mean this fiber will give silk stronger and stronger competition so that this country will have to import smaller and smaller amounts of this fiber from Japan. It is another step to make the United States less dependent upon foreign countries for its raw materials. It is not expected this reduction in nylon yarn will ease the tight delivery picture that has been apparent in nylon women's full-fashioned stockings since they were first introduced.

Yarn Men Golf at Lookout Mountain

The Chattanooga Yarn Association outing and golf-skeet tournament attracted a large crowd. It was held at Lookout Mountain Hotel, Chattanooga, Tenn., May 22-23. Officers of the association are G. S. Johnston, president; W. W. Crews, vice-president; Spencer Sparks, treasurer; and J. M. Ulmer, secretary.

Golf prizes were awarded for 36 holes, medal play, with handicap, and those receiving awards were: Low net, W. H. Cobble; 2nd low net, Clyde Riggs; Low gross for two days, Jack Wyatt; low gross first and second day respectively, Rowell Carter and Darden Hampton. Other golf prize winners were:

O. K. Jones, Jr., Sweetwater Hosiery Mills; Archie Fortune, Walker County Hosiery Mills; Lee Rayburn, Morristown Knitting Mills; L. C. Davis, Jr., Hiwassee Hosiery Mills, Inc.; J. H. McEwen, May McEwen & Kaiser Mills; Seiman Fortune, Walker County Hosiery Mills; Burton Frierson, Dixie Mercerizing Co.; J. W. Cassell, Jr., Richmond Hosiery Mills; S. T. Mallan, Sports—Wear Hosiery Mills; Ed Windle, Central Franklin Process Co.

Frank Strain, Redwine & Strain; R. E. Claussner, Claussner Hosiery Mills; P. H. Thompson, Textiles, Inc.; George Szabo, Holston Mfg. Co.; Alfred Thatcher, Standard-Coosa-Thatcher Co.; W. A. Traver, Sr., Central Franklin Process Co.; Bob McCamy, Cabin Crafts; R. L. Shelton, Claussner Hosiery Mills; James Fortune, Walker County Hosiery Mills; E. W. McMillin, Richmond Hosiery Mills; R. D. McDonald, R. D. McDonald Co.; Joe Callicott, Se-Ling Hosiery Mills; Fred Johnson, North American Rayon; Guy Henley, W. B. Davis & Son; Reid Maynard, Tower Hosiery Mills; Allan Traver, Jr., Central Franklin Process Co.

Henry Crumbliss, Cannon Mills; Ernest Clark, Ingram Spinning Co.; C. H. Corbett, Signal Knitting Mills; C. Ralph Ewing, Central Franklin Process Co.; Karl Ginter, Industrial Dyeing Corp.; R. C. Moyer, Blue Mountain, Ala.; W. R. Pittman, Sugar Valley Chenille Co.; F. C. Robinson, Robinson Mfg. Co.; John Stickley, William Whitman Co.; Gene Shea, Unique Knitting Mills; T. H. Asbury, Margate Hosiery Mills; Henry Stokes, Celanese Corp.; Bob Shapard, Spaulding Knitting Mills; Bob Griffith, R. H. Griffith Co.; Rip Hardeman, R. W. Mann and J. W. Watson, The Trion Co.

First prize in the skeet shoot was won by Bruce Lauderback.

Besides golf and skeet the crowd was entertained at the annual banquet by an excellent floor show.

ADDISON (ED) KOHOUT, who recently joined the technical staff of Virginia Maid Hosiery Mills, Inc., Pulaski, Virginia. Mr. Kohout, who formerly was with Nolde & Horst Company of Reading, Pa., holds the title of chief chemist and dyer, and will have complete charge of dyeing and finishing the entire production of all Wallner associated mills. The announcement comes from Thomas J. Wallner, president. Mr. Kohout is a graduate of Philadelphia Textile School and has been affiliated with the hosiery industry for 23 years.

Carolina Yarn Association Holds Business Meeting

The Carolina Yarn Association held its spring business meeting at the Sedgefield Inn, Greensboro, N. C., June 3, with about 40 members present. A golf tournament was held for members and it was decided to hold the annual golf tournament at Pinehurst, N. C., the latter part of October. Officers elected were Gordon Hope, A. M. Tenney, Associates, president; H. B. (Ike) Summerell, North American Rayon Corporation, vice president; Frank Causey, C. W. Causey, Jr., Yarns, secretary; and James McDowell, Hemphill Company, treasurer.

Tests to Determine Skin Irritation in Textiles

The United States Testing Company, Inc., Hoboken, N. J., has developed tests whereby the skin-irritating effects of textiles and their finishes may be accurately judged. The tests will determine the presence of harmful irritants and toxic agents in a wide variety of materials and fabrics, such as dresses, hosiery, under garments, overcoating, suitings, furs, etc.

The tests were developed as a result of many retail store and consumer complaints as to irritating effects of a material or fabric on the skin, producing in many cases, a severe rash or eczema, generally followed by an infection, the condition usually being known as dermatitis or inflammation of the skin.

The laboratories of the company have three tests for the irritating condition (1) patch test (2) sensitivity test and (3) the toxicological effect.

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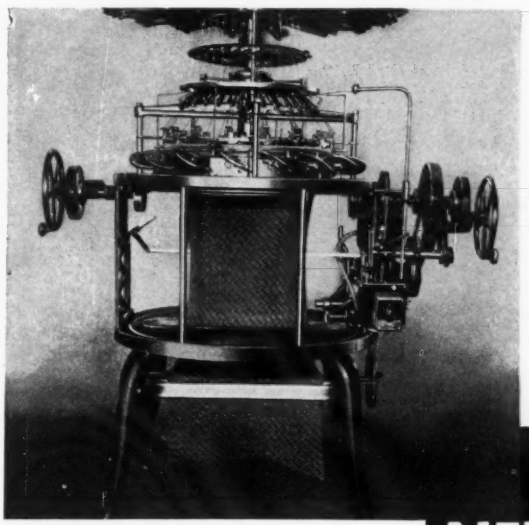

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TRENDS—YARN MARKETS

Government Ceiling in Combed Yarns Causes More Cautious Attitude Among Buyers and Sellers—Silk Strong Largely on Account of Production Curb in Japan—No Drastic Price Changes Expected in Rayon—Worsted Higher but Advance Slower

Philadelphia, June 16, 1941

THE OUTSTANDING DEVELOPMENT in the yarn markets this month occurred May 26 when the Government announced ceiling prices for combed cotton yarns. Prices in the Government list were considerably under those that had been quoted by most spinners just previous; as an example, 30s single was listed by the Government at 42 cents whereas spinners in most instances had been quoting this at 50 cents or higher and ply counts were also cut considerably in the new list. This immediately stopped trading and it has not resumed in an active fashion yet as spinners and their customers have not fully digested the full effects of this major step. It has also brought about a more cautious feeling in other yarns. Rayon producers that had been predicting advances have since said that if changes do come these will be very conservative. Worsted yarns are slightly higher than last month but even here the price movement has been slower than in any recent month.

Cotton Yarns

The setting of a ceiling by the Government in combed yarns on May 24 was the most important development in the sales yarn market for many years and it has had drastic ramifications in other type yarns. The main effect in all branches of the market has been to stop trading and new business since that time has been confined to small quantities wanted for immediate use. The Government ceiling drastically cut the price of combed yarns and since that time there has been a sympathetic easing in carded. Early in June leading mercerizers also revised their list with most revisions being downward although no large changes were made. The effect on buyers has been to create doubt as to whether the recent prices of carded and mercerized will hold, many feeling that the revisions made up to this time have not been sufficient. For example, knitters using mercerized yarns have asserted finer numbers do not fully reflect the new combed ceiling and they point to 60s two-ply mercerized at 88 cents in the new list which is unchanged from the old mercerized list when the same count in the gray was considerably higher.

There is a general belief among carded yarn producers that the differential between carded and combed in the same size should be about 3 cents but quotations of carded knitting yarns have not come down to that basis yet, remaining fairly steady at prices very little different from those of a month ago. The reason for this is the belief that the Government may later revise its ceiling prices for coarse count combed or those numbers coarser than 24s. In such sizes the Government list has a differential of ½ cent per count whereas the general trade practice has been for a long time past for such sizes to vary ¼ cent per number. If this change is made it would result in upward revision in such combed counts as 10s to 24s.

Tens single combed in the Government list is 82 cents and if the changes in the coarse counts recommended by the industry are made they would bring this size up to 35½ cents. During the last few days carded yarn producers have been holding 10s single at 32 cents or slightly higher which is the same price for combed. The reason for this is that carded producers believe the 32 cent level is the proper one in relation to the same size in combed after the suggested revisions are completed. Combed spinners have been reluctant to quote on new business due to this uncertainty and during recent weeks shipments of such yarn have been greatly in excess of new orders so that since this action was taken by the Government spinners' backlogs have been sharply reduced. In the meantime both spinners and commission merchants report that shipments on old orders are at peak levels and there is a very severe pressure upon them for larger quantities for nearby shipments, several reporting that premiums are being paid for small spot lots in both carded and combed.

Silk

This commodity has been strong in price over the month with advances of about 12 cents compared with a month ago being registered and brought about largely by developments in Japan. There has been also a slight improvement in demand by American hosiery manufacturers but this has not been sufficient to bring about this increase in price. American statistics for May were slightly better than expected with takings reported at 22,440 bales as against estimates of about 21,000 bales. Imports were 23,408 bales and warehouse stocks increased about 1000 bales bringing these up to 50,341 bales. The intransit was sharply higher at 23,700 bales as a result of the heavier exports during May.

In connection with the delivery total of 22,440 bales it has been claimed that the actual consumption in this country was somewhat higher in view of the fact that some manufacturers are supposed to be accumulating stock reserves against unforeseeable contingencies such as further strain on relations between this country and Japan. The hosiery industry in April consumed only 20,264 bales of raw silk, the least used during any April in the last seven years, according to a report of the National Association of Hosiery Manufacturers. The previous low for the month was in 1934 when 18,744 bales were taken. In April 1940, 21,184 bales were used and 19,350 bales were used in March of this year. Larger imports during May as well as the decline in mill takings helped to swell the end-of-the-month warehouse total. At the same time it was pointed out these stocks amount to only about two months' supply and that with any further contraction in cargo space, which might delay shipments of silk from Japan, mill men might find them inadequate.

Rayon

Demand for rayon yarn has been at record-breaking levels and shipments continue to rise with producers' stocks showing further sharp shrinkage. There has been no change in price with nothing to indicate a nearby revision. Shipments of filament yarn to domestic consumers during May amounted to 39,000,000 pounds compared with 38,700,000 pounds in April and 32,200,000 pounds in May of last year. Domestic shipments of rayon yarn for the first five months of the current year totaled 180,000,000 pounds as compared with 154,700,000 pounds in the corresponding period last year or an increase of 17 per cent. Stocks of filament yarn held by producers at the end of May amounted to 5,900,000 pounds compared with 7,400,000 pounds at the end of April and 12,500,000 pounds at the end of May last year.

Worsted Yarn

Outerwear manufacturers are operating at active rates and consuming worsted yarns in such heavy volume that it is no longer a question of price in this branch of the textile industry but of deliveries. In many instances spinners are unable to promise deliveries on new business for three to four months and in other instances where they are sold not quite so far ahead this has been because they have confined their selling to a limited time and not due to any lack of demand. Prices are up an average of 5 cents a pound with 2-20s, 50s, Bradford in the oil at $1.52½ for which some spinners were quoting $1.45 a month ago. Due to the higher level there has been a large amount of substituting and such types as cotton cores or blends made from spun rayon and mohair which are offered considerably under prices of the same size yarn in all wool. Manufacturers realize that beginning next month this content will have to be marked on the label but they believe the lower price will overcome any such objections.

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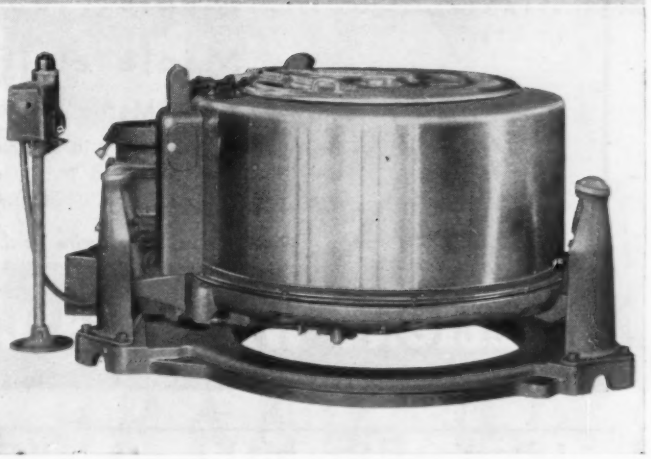

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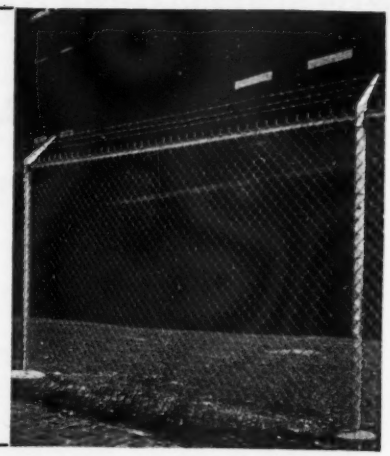

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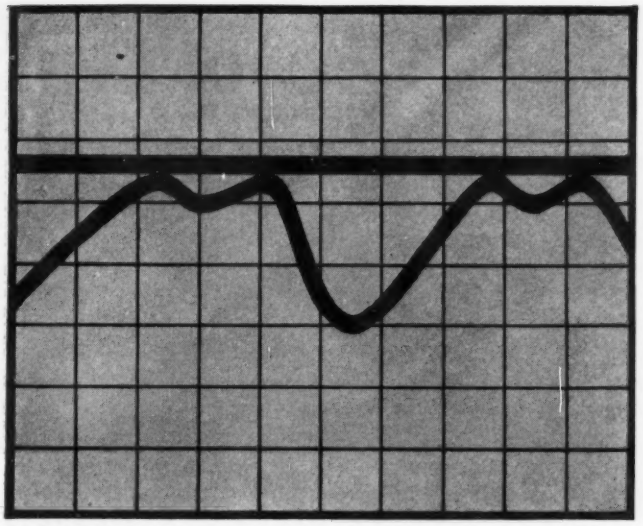

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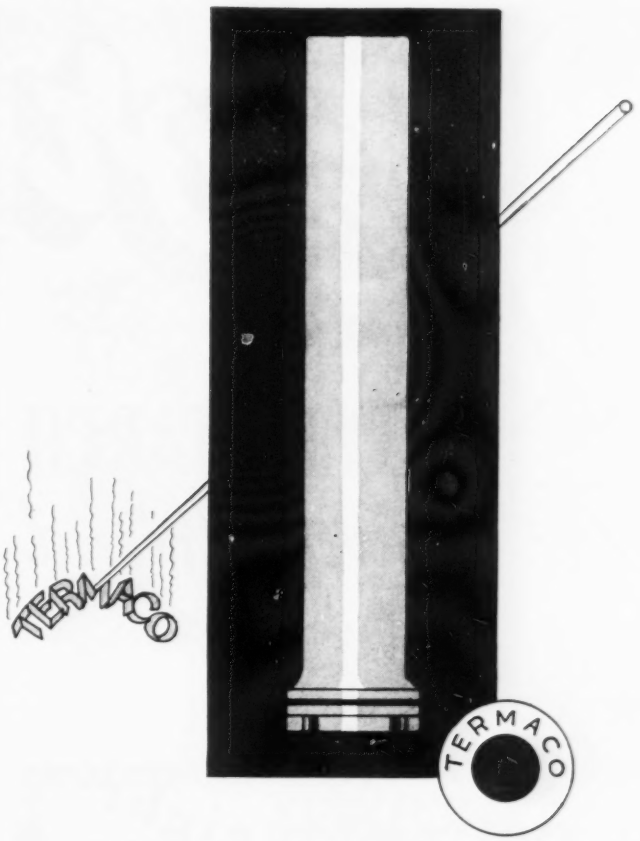

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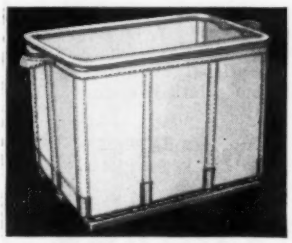

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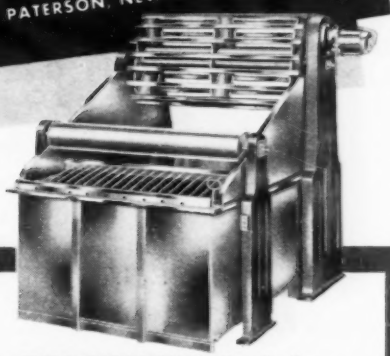

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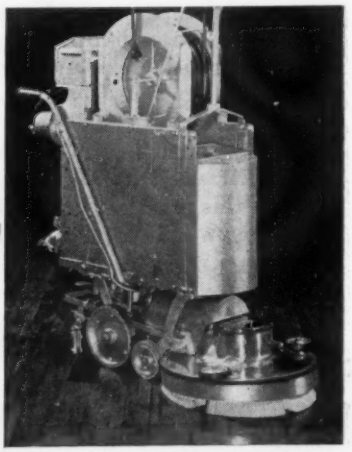

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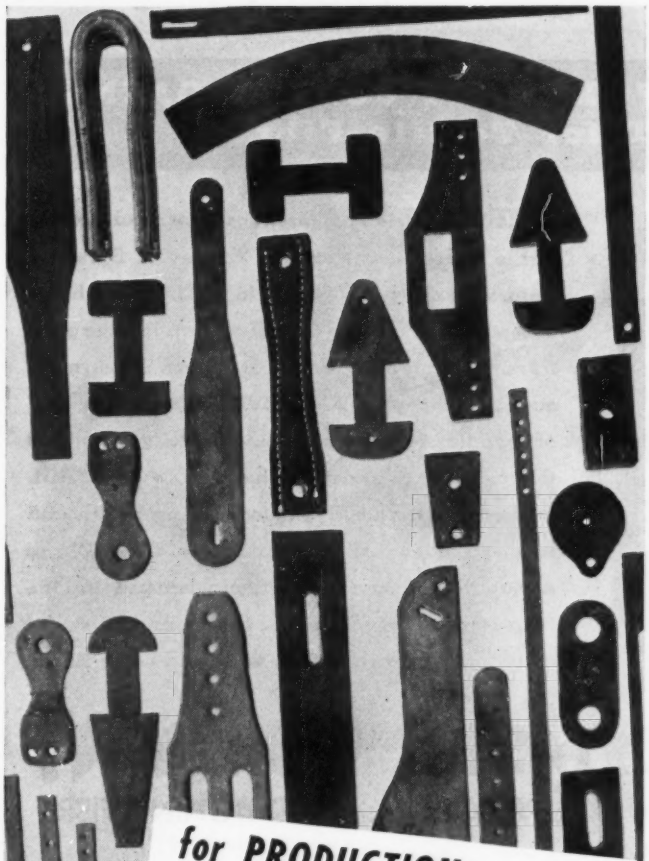

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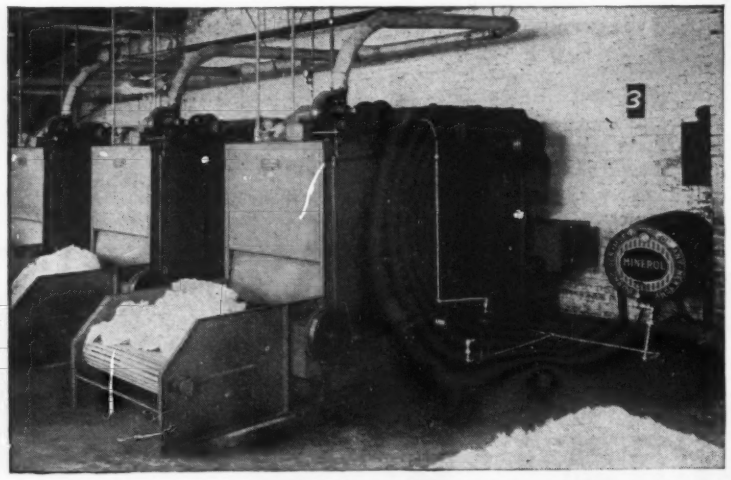

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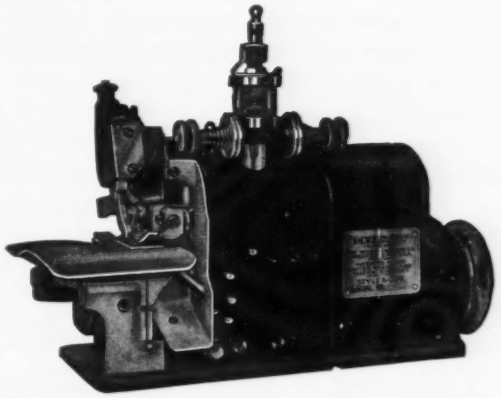

Also Plain Crochet and Shell Stitch Models for Ornamental Edge Finishing and Class 60 Machines for Butt Seaming.

—200 VARIETIES FOR 200 PURPOSES—

Write for details and let us demonstrate these machines on your own fabrics.

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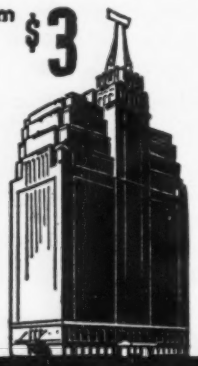

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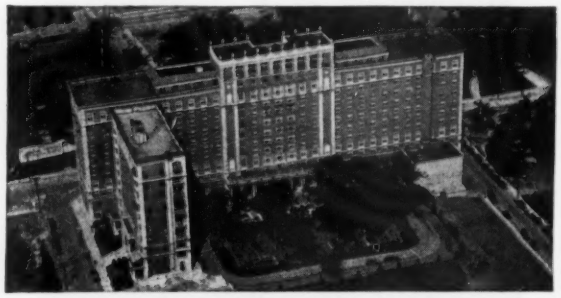

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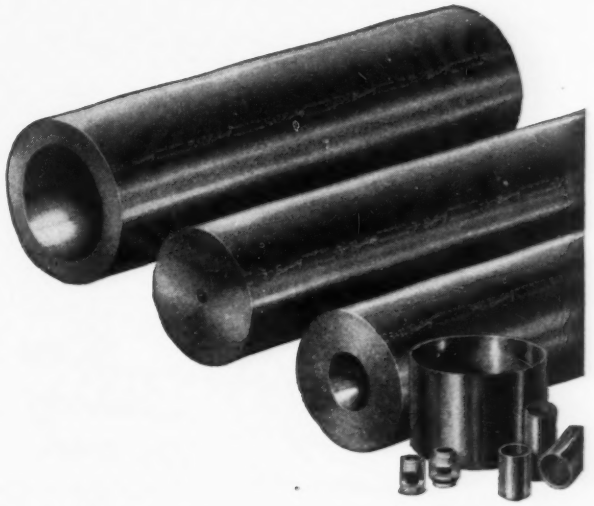

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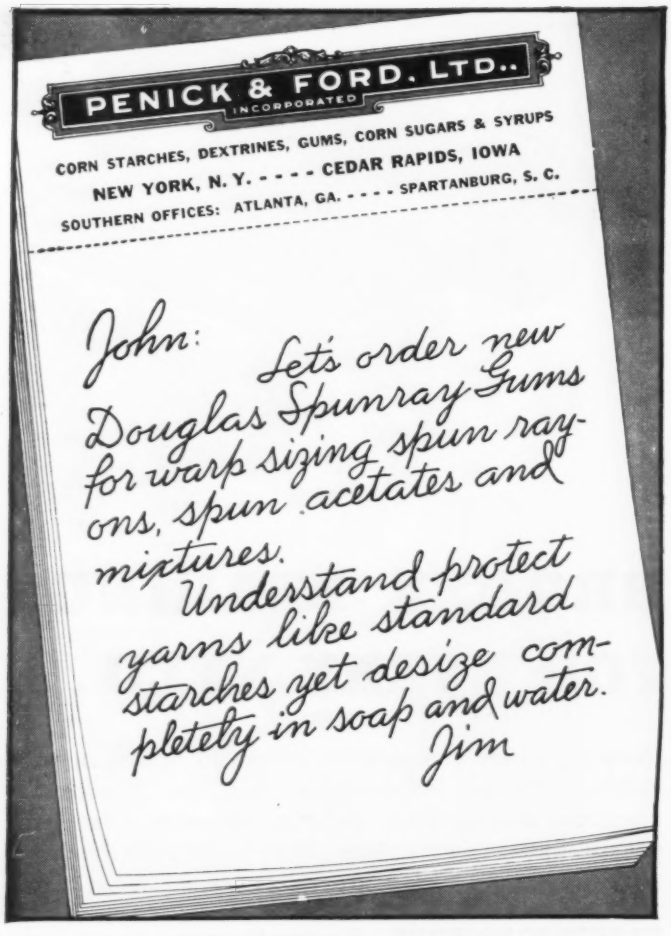
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	Per Inch		Per Inch
1 inch	$5.00	13 inches	$4.20
3 inches	4.80	20 inches	4.00
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Advertisements set "want ad style." Positions wanted .05 word per insertion. Minimum charge $1.00 per insertion. Cash with order. All other classifications .10 word per insertion. Minimum charge $2.00 per insertion. Advertisements of equipment, for sale, for rent or wanted and professional cards are accepted at display rate only.

Box number address care of COTTON, Grant Bldg., Atlanta, Ga., count as eight words.

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1206 Johnston Bldg., Charlotte, N. C.
514 Munsey Bldg., Washington, D. C.
Paul B. Eaton, Former member Examining Corps U. S. Patent Office

POSITION WANTED

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WANTED FLAT CARDS

12 Saco-Lowell or Saco-Pettee 40" revolving flat cards. Please specify year, hand and whether with or without clothing. Address Box 540, care COTTON, Grant Bldg., Atlanta, Ga.

POSITION OPEN

Opening for Assistant Night Superintendent cotton mill located in North Carolina. Must be a hustler for both quality and quantity. Address reply Box X care COTTON, Grant Bldg., Atlanta, Ga.

WANTED

Leather belt in good used condition, 24 inch or wider, three-ply, 94 ft. or longer for a main drive. Lumber, P. O. Box 196, Macon, Georgia.

"INDEX" to better quality textiles

For Dyeing, Flameproofing	Use Solvay Ammonium Chloride
For Dyeing	Use Solvay Caustic Potash
For Dyeing, Hypochlorite bleaching, Kier boiling, Mercerizing, Neutralizing	Use Solvay Caustic Soda
For Hypochlorite bleaching, Oriental rug finishing, Water conditioning	Use Solvay Liquid Chlorine
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For Dyeing, Softening	Use Solvay Potassium Carbonate
For Acid neutralizing, Degumming, Fulling, Scouring, Soap building, Softening	Use Solvay Snowflake Crystals
For Acid neutralizing, Fulling, Hypochlorite bleaching, Kier boiling, Scouring, Soap building, Water conditioning	Use Solvay Soda Ash
For Dyeing	Use Solvay Sodium Nitrite
For Acid neutralizing, Degumming, Fulling, Scouring, Soap building, Softening	Use Solvay Textile Soda

FOR TECHNICAL SERVICE . . . In the Solvay Laboratories, textile men with years of experience study your problems and make recommendations on the basis of laboratory findings. *Solvay will be glad to send these textile specialists into your plant to study actual operating conditions and help adapt laboratory findings to specific plant conditions.* Write today to

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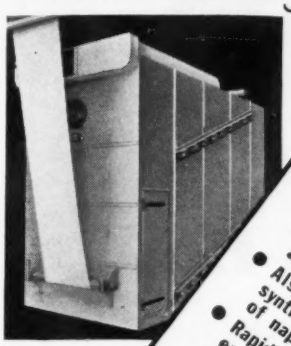
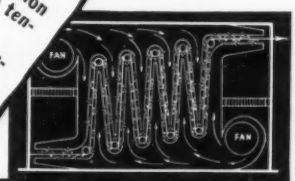
40 Rector Street New York, N. Y.

PROCTOR
Roller Type DRYER

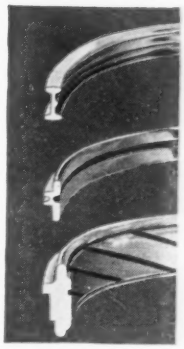


- Replaces drying cylinders or cans in the drying of many types of piece goods.
- Especially desirable for drying dyed fabrics before developing.
- Ideal for the drying and curing of piece goods in the wrinkle-proofing, shrinkage stabilization and water proofing processes.
- Also for fabrics made from synthetic fibres, and all kinds of nap fabrics.
- Rapid drying means only short exposure of fabric to drying medium.
- There is minimum of tension on goods warpwise and no tension at all on filling.
- There is no narrowing or wrinkling of the fabric.
- Individually motor-driven rolls adjust automatically to the speed fabric is fed.
- Important all-around savings are realized.



PROCTOR & SCHWARTZ · INC · PHILADELPHIA

Complete



The DIAMOND FINISH line encompasses every type of ring needed for spinning and twisting textile fibres. Not only all standard types, but in addition we offer exclusively the patented Eadie lubricated rings, which have stepped up production so greatly on a wide range of operations. Come to DIAMOND FINISH for ring Counsel and Service that's COMPLETE.

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Makers of Spinning and Twister Rings since 1873

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Allendale 3521

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"The Finishing Touch" . . . on Textiles . . . get it with BURK-SCHIER Finishing Agents. BURK-SCHIER dyeing and finishing agents economically process goods that have sales appeal.

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Kali

TEXTILE CHEMICALS

HYDROXY* WOOL OIL

replaces olive oil for worsted spinning. Gives emulsion with water. Maximum spread. Odorless. Stainless. Scours out easily. Economical.

*(Reg. U. S. Pat. Off.)

KALI MANUFACTURING CO.

Manufacturing Chemists

1410 North Front Street, Philadelphia, Pa.

Get PROTECTION Save TIME MONEY With

Pay-Hour Fine Warning Issued

Serious consequences from failure of an employer to keep records showing the amount of time worked and the wages paid to each employe in accordance with wage-and-hour regulations was pointed out Wednesday by ———, ———, official representative of the wage-and-hour division.

——— was notified by the ——— office Wednesday that fines totaling $1,500 have been levied in a case where no records had been kept. A hat company, ———, ———., was fined $1,000 and the treasurer was fined $500 for failure to keep records.

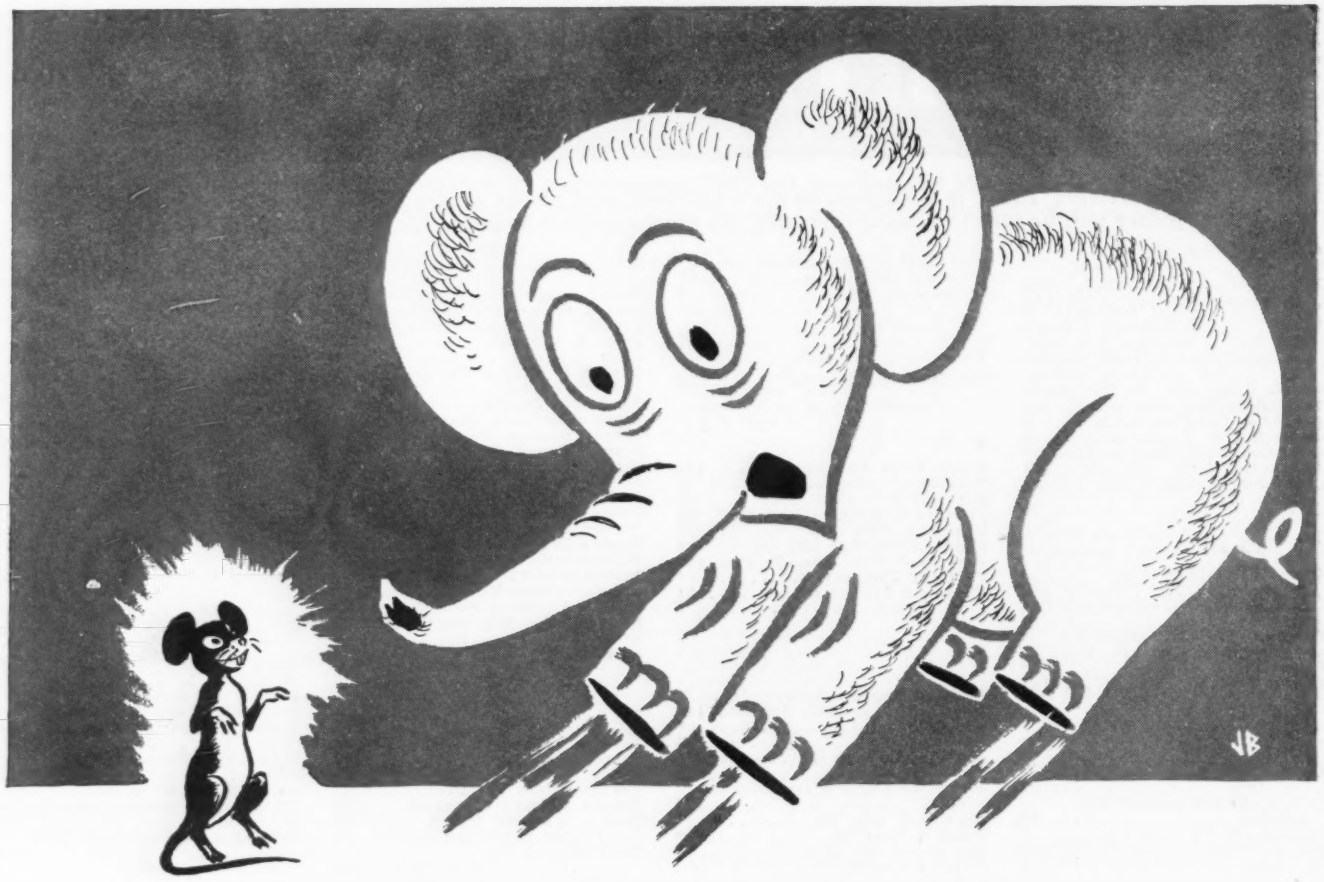
5 in 1 Pay Envelopes

1. A permanent Social Security record for the employer.
2. A permanent Wage-Hour record for the Employer.
3. A signed receipt from the employee covering wages paid, hours worked, etc., for employer's permanent file.
4. A statement of wages, hours, and deductions for the employee as required by law.
5. A strong payroll envelope.

Write to us—save money by installing this system now!

ATLANTA ENVELOPE COMPANY

P. O. Box 1267 Atlanta, Ga.



THE LITTLE ONES ARE PLENTY IMPORTANT

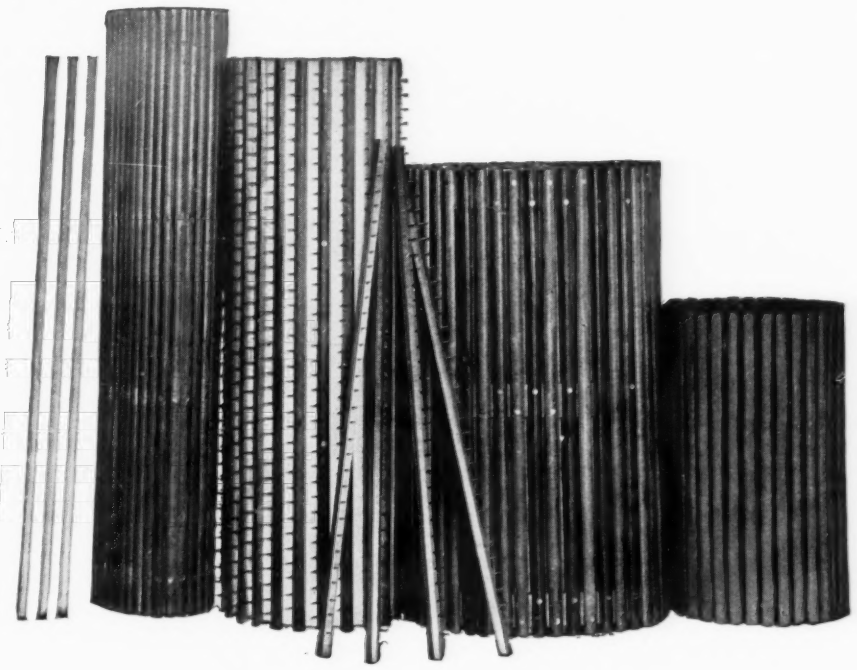
We believe it would be helpful if the tendency to confuse *importance* with *size* could be eliminated. Often the little job requires the most expert attention and the greatest care.

Thorough performance on jobs of all dimensions—small projects as well as large ones—has earned for Robert and Company a reputation for outstanding service to the textile industry. Whether a complicated plant expansion or a single elevator shaft is involved . . . a complete modernization program or the installation of a stoker . . . the work should receive the same degree of painstaking care.

If your own project is small, Robert and Company is just as interested in consulting with you as we would be if you were contemplating a major project. Our years of experience in textile work and all our professional facilities are at your disposal at any time we may be of service to you.

ROBERT AND COMPANY
ATLANTA INCORPORATED GEORGIA
Architects and Engineers

T E X T I L E S E R V I C E



PICKER APRONS

Picker Aprons, as made by F. C. Todd, Inc., are of the finest materials, assembled by skilled workmen, assuring dependable day-in and day-out performance without expensive stops for adjustments and repairs.

These Aprons, because of their unequalled quality, are now standard equipment in textile mills throughout the country.

Available in both spiked and slat types for all makes of pickers, openers, breakers — waste machines and garnet machines.

We Carry Parts for

PICKERS
+
CARDS
+
LAP MACHINES
+
COMBERS
+
DRAWING
+
SLUBBERS AND ROVING

SPINNING
+
TWISTING
+
WINDING
WARPING
SPOOLING
+
BOBBINS
+
SPOOLS
+
SKEWERS

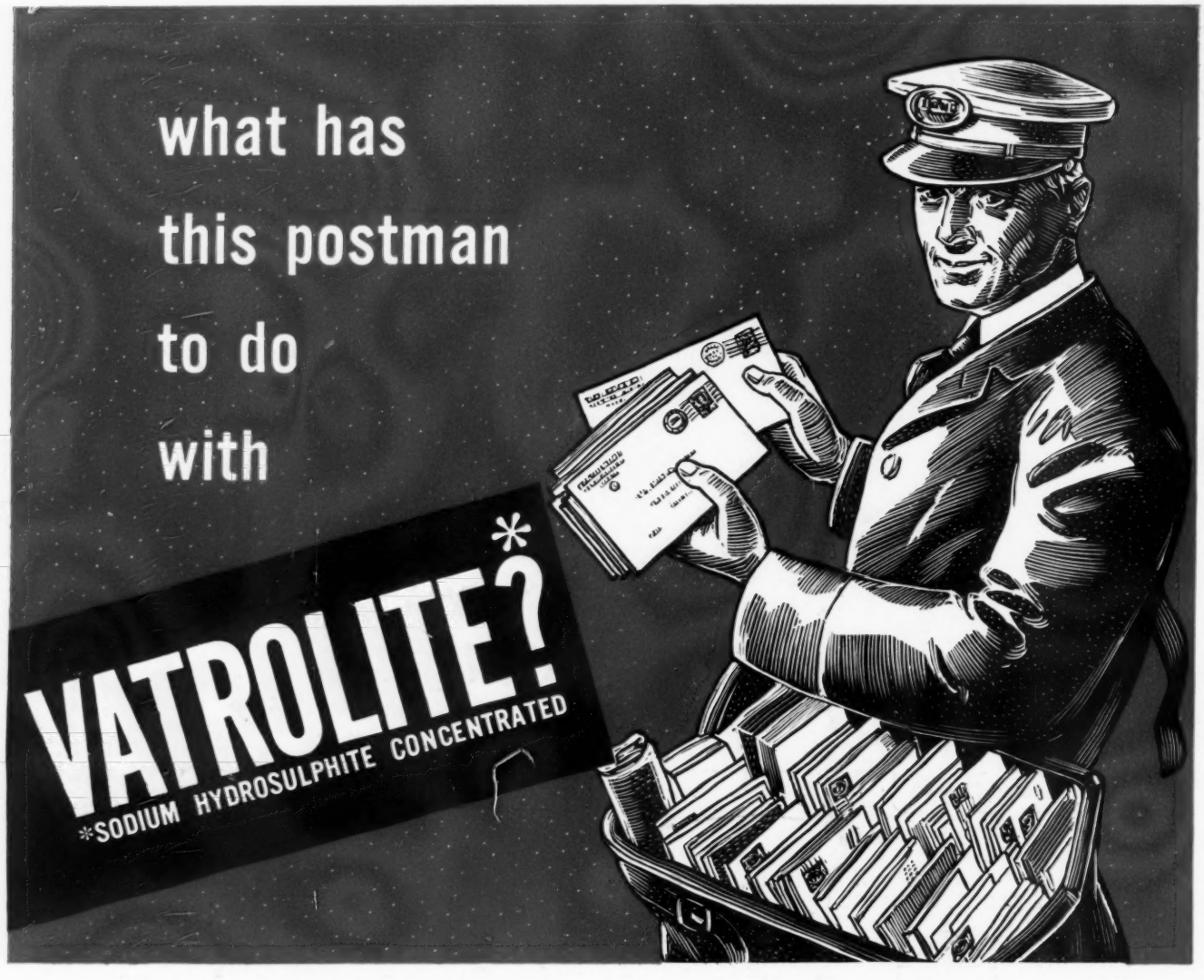
Quality and Service Our Motto.

Liquidations F. C. TODD, Pres. & Treas. *Appraisals*

F. C. TODD INCORPORATED

TEXTILE MACHINERY AND SUPPLIES

GASTONIA, N. C.



● The United States Postal Service functions so efficiently that we just plain take it for granted.

More and more dyers are discovering that they can take Vatrolite for granted, too. They have proved its dependability for vat-dyeing and color reduction. They know they can count on Vatrolite for safe, sure performance.

SAFE. When you use Vatrolite on cotton and rayon for color reduction or for vat-dyeing, you count on these factors:

(1) **GRANULAR UNIFORMITY** giving you less dusting. (Try this simple test. Sift a small amount of Vatrolite through a fine wire mesh. Then sift an equal amount of some other reducing agent. Notice that fewer small particles sift through in the Vatrolite pile.)

(2) **HIGH STABILITY** because of the care and laboratory control exercised in the manufacture of Vatrolite.

(3) **FULL STRENGTH** that gives Vatrolite staying power and means longer and larger runs for you.

ECONOMICAL. Vatrolite's high uniformity and purity result in economical use. Since first introduced in 1930, Vatrolite has been put to work for more and more dyers — has steadily increased its sales. Let Vatrolite work for *you*.

ROYCE CHEMICAL COMPANY

CARLTON HILL, NEW JERSEY

MANUFACTURERS OF HYDROSULPHITES INCLUDING VATROLITE*, PAROLITE*, DISCOLITE*, AND SULPHONATED OILS INCLUDING VELV-O-RAY*, CASTROLITE*
*Reg. U. S. Pat. Off.